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AN

ACCOUNT

OF THE

DISEASES

Which were moſt frequent in the

of the Army

BRITISH MILITARY HOSPITALS

in Germany,

From January 1761 to the Return of the Troops to England in March 1763.

To which is added,

An ESSAY on the Means of Preſerving the Health of Soldiers, and conducting Military Hoſpitals.

By DONALD MONRO, M.D.

PHYSICIAN to his MAJESTY'S ARMY, and to ST. GEORGE'S Hoſpital.

LONDON:

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TO THE

KING.

May it pleaſe Your MAJESTY,

TO permit me to lay at your Feet the following Sheets, publiſhed with a View to be uſeful to thoſe, who hereafter may have the Care of the Health of your MAJESTY's Troops.

YOUR MAJESTY'S particular Inquiries into the State of Your Military Hoſpitals, in every Quarter of the World, in the Time of the late glorious and ſucceſsful War; Your Concern for every Officer and Soldier who ſuffered either by Sickneſs or by Wounds in the Cauſe of their King and Country; and Your Solicitude to procure them every poſſible Aſſiſtance and Relief, cannot fail to excite the higheſt Admiration of Your MAJESTY'S Goodneſs in the

Breaſt

Breaſt of every Subject, and the warmeſt Gratitude in the Heart of every Soldier.

THE Knowledge of theſe Circumſtances induced me to flatter myſelf, that a Work of this Kind would be agreeable to Your MAJESTY; and ſhould this Attempt towards pointing out the Means of alleviating thoſe Miſeries, which neceſſarily attend a Military Life in the Time of Service, be acceptable, I ſhall obtain the utmoſt of my Wiſhes;

it being the greateſt Ambition of my Heart ever ſo to act as to merit Your MAJESTY's Approbation, and to ſubſcribe myſelf,

May it pleaſe Your MAJESTY,

Your MAJESTY's moſt dutiful Subject,

And moſt faithful

and humble Servant,

DONALD MONRO.

THE

PREFACE.

AMONG the numerous Authors of Obſervations in the Art of Phyſick, there are but few who have expreſsly written on the Treatment of thoſe Diſtempers, moſt generally incident to an Army in the Field: The following Work, therefore, ſeems to have a fair Claim to be acceptable to the Publick, having been compiled during the Author's Attendance on the

Britiſh Military Hoſpitals in *Germany* in the late War; and in order to render it of ſtill further Uſe, he has occaſionally added, by Way of Note, the Practice of ſome of the moſt eminent Phyſicians in ſimilar Diſeaſes, as well as a few Hiſtories of Caſes which paſſed under his own Care at *St. George*'s Hoſpital, *London*.

To avoid the Repetition of the Compoſition of particular Medicines, and the Interruption that would be given by their being inſerted in the Body of the Work, a ſmall Pharmacopœia is added, to which his Practice in the Army Hoſpitals was chiefly confined.

In a commercial Country like our own, where Numbers of Hands are conſtantly wanted for the carrying on our Manufactories, we have a ſtrong political Argument to add to that drawn from the Dictates of Humanity, why the Life of every individual ſhould be moſt carefully attended to.

The Preſervation of the Lives of Soldiers is then with us a Matter of the higheſt Importance, in order to make as low as poſſible the Number of Recruits who muſt be perpetually drawn off for the Service of War. The Author has, therefore, in this Treatiſe, endeavoured to point out the Means moſt likely to keep Men healthy when employed

employed in different Services; and alſo the Manner in which Military Hoſpitals ought to be fitted up, and conducted.—As he was never in any of the warm Climates, nor ever at Sea along with Troops aboard of Tranſports, whatever is mentioned relative to ſuch Situations, is to be underſtood as taken from printed Accounts of theſe Subjects, or collected from the Converſation of phyſical Gentlemen, who were employed on ſuch Services during the two laſt Wars.

It is but Juſtice here to obſerve, that the Marquis of *Granby*, Commander in Chief of the *Britiſh* Troops in *Germany*, as well as the Reſt of the General

General Officers employed on the *German* Service, always paid the greateſt Attention to the Soldiers when ſick in Hoſpitals; and were particularly ready in giving Orders for all ſuch Things as were neceſſary or proper for them.

JERMYN-STREET,
April 15, 1764.

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ERRATA CORRIGENDA.

Page 13, line 11, for *Pleuretic*, read *Pleuritic*.
18, 10, of Notes, for *Acadamy*, read *Academy*.
28, 22, for *Cinamon*, read *Cinnamon*.
35, 5, of Notes, for *Calomile*, read *Calomel*.
51, 12, dele *uſed in this Way*.
166, 12, of Notes, for *which almoſt depend*, read *which almoſt always depend*.
207, 13, of Notes, for *Vena poſtarum*, read *Vena portarum*.
259, 4, for *appeared*, read *appear*.
261, 1, of Notes, for *became*, read *become*.
280, 20, for *Chamamel*, read *Chamæmel*.
290, 4, for 3^{tis} 4^{tiis}, read 3^{tiis} 4^{tis}.
293, 13, for *Mithridatum*, read *Mithridatium*.
336, 12 & 13, for *bathe themſelves as often*, read *bathe early in the Morning as often*.
352, 7, for *in Bilanders*, read *and were to go in Bilanders*.
353, 2, for *the leaſt Appearance of the Malignant Fever*, read *the Malignant Fever appearing*.

OF THE

MALIGNANT and PETECHIAL

FEVER.

Typhus petechialis. Gradus.

A Malignant Fever, and Fluxes, began to appear among the Soldiers in Autumn, 1760, while the Allied Army remained encamped about *Warbourg*, from the Beginning of *Auguſt* till the 13th of *December*, when they went into Cantonments. During that Time, there had been a continued Rain for ſome Months, and the Camp and neighbouring Fields, and Villages, were not only filled with the Excrements of ſuch a numerous Army, but likewiſe with infinite Numbers of dead Horſes, and other dead Animals, which had died in doing the neceſſary military Duties, and in bringing Forage, Proviſions, and other

Neceſſaries, to the Camp: beſides this, the Field where there had been an Action on the 31ſt of *July*, and where many of the Dead were ſcarce covered with Earth, was in the Neighbourhood of the Camp.

Not only the Soldiers, but the Inhabitants of the Country, who were reduced to the greateſt Miſery and Want, were infected with the Malignant Fever, and whole Villages almoſt laid waſte by it.

Such a Number of Soldiers was ſent to *Paderborn* as crowded the Hoſpitals there, and increaſed the Malignancy of the Diſtemper, ſo that a great many died.

When I arrived at *Paderborn*, in the Beginning of *January*, 1761, the Fever was upon the Decline in the General Hoſpitals, though it was ſtill rife; but by ſending off a Party of Convaleſcents to *Hervorden*, which thinned the Hoſpitals, it became leſs frequent, and but few died. The Guards marched upon the Expedition into *Heſſe*, on the eleventh of *February*, which gave us full Room for billetting all our Convaleſcents, and thinning the Wards; by which Means the

the Fever almoſt entirely ceaſed in all the Hoſpitals we had before they went away; though there ſtill remained about four hundred ſick.

When the Guards marched out of *Paderborn*, they left the Care of their Sick to us, who belonged to the General Hoſpital: the firſt Regiment of Guards left ſixty ſick; the ſecond, twenty-nine; the third, twenty-eight; and the Granadiers, fifteen, in their regimental Infirmaries; who were moſtly ill of the Malignant Fever: amongſt whom the Infection was ſo very ſtrong, that, although I procured the Sick new airy Houſes for Hoſpitals, which were kept as clean and well-aired as poſſible, and procured clean Bedding, and clean Linen for every Man, and had the Sick laid thin, yet ſeveral died, and it was ſome Time before we got entirely free of the Infection. The firſt and third Regiments ſuffered moſt, owing to all the Sick of each Regiment being put into a particular Hoſpital by themſelves, which kept up the Infection, ſo that they loſt one-third of thoſe left ill of this Fever; and many of the Nurſes, and People who attended them, were ſeized with it. But

not being able to procure particular Houſes for the Sick of the *Coldſtream* or Second Regiment, and for the Granadiers, I diſtributed them through the different Hoſpitals we had then in Town, where the Contagion had ceaſed; and by their being thus ſcattered, while they were kept very clean, and at as great a Diſtance as poſſible, from the other Patients in the Wards where they were put, they loſt few in Proportion to the firſt and third Regiments, and the Diſorder did not ſpread.

About the End of *May*, the Weather was very warm at *Oſnabruck*; when this Fever began to make its Appearance in the Corner of a large Ward, which was next to one kept for ſalivating venereal Patients; and only divided from it by means of a few thin Deals. Perceiving a ſtrong Smell in this Place, I ſuſpected that the Fever aroſe from the foul Steams coming from the next Ward, and therefore ordered the ſalivating Ward to be thinned, and removed all the Sick from the Places near that Ward; and ordered thoſe that had catched the Fever to be put into large airy Places; by which means the Infection ſpread no further,

and

and only one, out of ſix or ſeven who had got the Fever, died.

At the End of *June*, the Weather was very hot at *Bilifield*, and the Fever began to ſhew itſelf by the Hoſpital being over-crowded, by a greater Number of Sick being ſent from the Army than we had proper Places to put them in; but it was put a Stop to in a few Days, by the Removal of the Hoſpital. Seventy Sick were left behind to the Care of a Mate, moſt of them ill of the Fever, of whom twelve died.

In the Beginning of *Auguſt*, a few Men were taken ill of the ſame Fever at *Munſter*, in one of the Hoſpitals which was too much crowded; but its further Progreſs was ſtopped by ſending a Number of recovered Men to Billet.

In *November* and *December* 1761, and *January*, *February*, and *March* 1762, we had ſeveral Men ſent from Quarters in the Town of *Bremen* to the Hoſpital, ſick of the Petechial Fever: they were quartered on the Ground-floors of low damp Houſes, and freſh Meat and Vegetables ſo dear that they could

not afford to buy them, but were obliged to live moſtly on ſalt Proviſions. I was told likewiſe that the ſpotted Fever was frequent among the lower Claſs of the Inhabitants. Some few were ſeized with this Fever in the Hoſpital itſelf; yet as the Houſe was not crowded, and we had a Number of ſmall airy Wards, the Infection did not ſpread; and we had but one or two who died of this Fever during the Winter, in the Hoſpital I attended.

In Summer 1762, we had only ten or eleven ill of this Fever in the Hoſpital at *Natzungen*, and only one died.

When the Troops marched from their Cantonments, in *December* 1762, towards the Borders of *Holland*, the twentieth and twenty-fifth Regiments of Foot left behind them, at *Oſnabruck*, thirty ſick; five of whom had Symptoms of the Hoſpital Fever, though no Petechiæ appeared; three recovered, and two died ſuddenly, being lodged in large open Wards (the only Places we had to put them in) with the Windows all broke, in very cold froſty Weather.

In

In *January* 1763, we had only three Patients in this Fever, with the Petechiæ upon them, who all recovered. After this we had none taken ill of it at *Oſnabruck*, while I remained there, which was till the twenty-fifth of *March*.

This Malignant Fever begun variouſly in different Subjects; for the moſt part with Cold and Shivering, Pain in the Head, and other Symptoms, commonly deſcribed as peculiar to this Fever. In ſome, it begun with a ſharp Pain of the Side, or other Parts, attended with acute inflammatory Symptoms; in others, it put on the Appearance of the common, low, or nervous Fever, for a Day or two. Blood drawn in the Beginning from ſome Patients did not ſeem much altered; from others it threw up a ſtrong inflammatory Buff (*a*); but where

(*a*) Dr. *Huxham*, in his *Treatiſe on the ulcerous ſore Throat*, p. 36, ſays, "I have very often met with this buffy or "ſizy Appearance of the Blood in the Beginning of Malignant Fevers; and yet, Blood drawn two or three Days "afterwards, from the ſame Perſons, hath been quite looſe, "diſſolved, and ſanious as it were." And in his *Eſſay on Fevers*, chap. viii. p. 108. ſays, "The firſt Blood frequently "appears

where the Fever had continued ſome time, it was commonly of a looſe Texture, and of a livid Colour; unleſs when the Sick were accidentally ſeized with pleuritic Stitches, or other Diſorders of this kind.

The Reaſon of this Difference of Symptoms in the Beginning, and of theſe different Appearances of the Blood, ſeemed to be, that ſuch Patients as laboured under Pleuriſies, low or other Fevers, being brought into Hoſpitals where the Malignant Fever was frequent, had their original Diſorders changed into this Fever by breathing a foul infected Air, and by their Communication with thoſe ill of the Fever, and of Fluxes; at other Times, a mere Acrimony of the Blood, ſet in Motion by a ſupervening Fever, determined the Diſorder to be of this kind: and I always obſerved, that thoſe Men were moſt apt to catch this Fever, whoſe Con-

" appears florid; what is drawn twenty-four Hours after, is " commonly livid, black, and too thin; a third quantity, " livid, diſſolved, and ſanious. I have ſometimes obſerved the " Craſis of the Blood ſo broke as to depoſite a black Powder, like " Soot, at the Bottom, the ſuperior Part being either a livid " Gore, or a dark green, and exceedingly ſoft Jelly."

ſtitutions

ſtitutions had been broke down by previous Diſorders.

The Fever appeared in different Forms. Some had only a Quickneſs of the Pulſe, attended with a ſlight Head-ach and Sickneſs, Whiteneſs of the Tongue and Thirſt, and a Lowneſs and Languor; which continued for a Week or more, and then went off, either inſenſibly, or with a profuſe Sweat, ſucceeded by a plentiful Sediment in the Urine. Moſt of thoſe who fell into profuſe kindly-warm Sweats recovered, the Sweat carrying off the Fever. Theſe profuſe Sweats continued for twelve or twenty-four Hours, and ſometimes for two, three, or four Days. In thoſe who had the Fever in this ſlight Degree, the Petechiæ ſeldom appeared; and it was only known to be this ſort of Fever by the other Symptoms, and the Malignant Fever being frequent at that time in the Hoſpitals. Dr. *Pringle* (*b*) very juſtly obſerves, "That theſe low Degrees of this "Fever are hardly to be characteriſed, and are "only to be diſcovered, in full Hoſpitals, by

(*b*) *Obſervations on the Diſeaſes of the Army*, part III. chap. vii. ſect. 3. third Edition, 1761.

"obſerving

" obſerving Men languiſh; though the Nature " of the Illneſs, for which they come in, ſhould " ſeem to admit of a ſpeedier Cure."

For the moſt Part the Fever appeared with more violent Symptoms, the Tongue became more parched and dry, more or leſs of a Delirium came on, attended with the other Symptoms commonly deſcribed as peculiar to this Fever.

When the Petechiæ appeared, they came out on the fourth, fifth, ſixth, or ſeventh Day; ſeldom after the eleventh or twelfth (*c*). They appeared moſtly on the Breaſt, Back,

(*c*) *Ramazini*, in his Treatiſe *De Conſtitutionibus annorum*, 1692, 3, 4, *in Mutinenſi civitate*, Sect. 19. mentions the Petechial Fever which had been frequent the three foregoing Years; in which the Petechiæ appeared commonly on the fourth or ſeventh Days, and almoſt all thoſe died in whom they appeared on the firſt Day. Theſe Spots came out firſt on the Neck, the Back and Breaſt; and it was obſerved that none eſcaped unleſs theſe Spots extended themſelves as far as the Nails of the Toes, vaniſhing by Degrees on the upper Parts. He tells us likewiſe, that this Fever was attended with an Inflammation of the Throat, which, about the Height of this Diſorder, terminated in a white ulcerous Cruſt. This ſore Throat ſhould ſeem to be the ſame which we now call *the malignant ulcerous ſore Throat*, which I never once ſaw while I was with the Troops in *Germany*.

Arms,

Arms, and Legs, and ſometimes, tho' rarely, on the Face. They had exactly the Appearance deſcribed by Dr. *Pringle*, either like ſmall diſtinct Spots of a reddiſh Colour, or the Skin looked ſometimes as if it had been marbled, or variegated as in the Meaſles, but of a Colour more dull and lured. As they began to diſappear, they inclined to a dun or brown Colour, and looked like ſo many dirty Spots. I never ſaw them riſe above the Skin; nor did I once ſee any miliary Eruptions in this Fever; which agreed exactly with what Dr. *Pringle* had obſerved in the former War, and in the Beginning of this; however, we ought not to conclude from thence that miliary Eruptions are never obſerved in Fevers of this kind; for Dr. *Huxham* (*d*), Dr. *Haſenohrl* (*e*) and Dr. *Lind* (*f*), beſides

(*d*) Dr. *Huxham*, in his *Eſſay on Fevers*, ch. viii. p. 97, tells us, that ſometimes, about the eleventh or twelfth Day, on the coming on of profuſe Sweats, the Petechiæ diſappear, and vaſt Quantities of ſmall white miliary puſtules break out.

(*e*) Dr. *Haſenohrl*, in his Treatiſe *De Febre Petechiali*, cap. i. p. 12. relates a very particular Caſe, where the Petechiæ appeared on the fourth, and the white miliary Eruptions on the ſeventeenth Day of the Fever.

(*f*) Dr. *Lind*, in his *ſecond Paper on Fevers*, p. 105. mentions Spots

beſides many other good Practitioners, mention their having ſeen them.

Many had no Petechiæ through the whole Courſe of the Diſorder; but in all who were very bad, the Countenance looked bloated, and the Eyes reddiſh and ſomewhat inflamed; and though the Skin was commonly dry, yet the *Perſpiration from the Lungs* was ſtrong. By theſe Circumſtances one might frequently diſcover that the Patient laboured under the malignant Fever, without aſking any Queſtions.

When Men were taken ill of a Fever, which we ſuſpected to be of the malignant kind, our firſt Care was to lay them in airy Places, ſeparate as much as poſſible from the other Men, and to keep them extremely clean; and they were put on low Diet, and allowed as much Barley or Rice-water as they choſe to drink, which was commonly ordered to be acidulated with the *Spiritus Vitrioli*.

Spots which riſe above the Surface of the Skin, and are of the miliary kind, as common in contagious Fevers, as he obſerved among the *French* Priſoners in *Wincheſter* Caſtle, in the Beginning of the Year 1761.

For

For the firſt two or three Days we could ſeldom diſtinguiſh, with Certainty, that the Fever was of the malignant kind, though we had often Reaſon to ſuſpect it. The Pain of the Head, the Fulneſs and Quickneſs of the Pulſe, and other Symptoms, led us commonly to take away more or leſs Blood, which the Patient bore eaſily, and for the moſt part it gave Relief (*g*). We ſeldom repeated this Evacuation where we ſuſpected the Fever to be of the malignant kind, unleſs a pleuritic Stitch, an acute Pain of the Bowels, or ſome other accidental Symptom, required it; or the Patient was ſtrong, and there were evident Symptoms of Fullneſs immediately before we

(*g*) Dr. *Huxham*, tho' he ſays "yet Bleeding to ſome Degree "is moſt commonly requiſite, nay neceſſary, in the ſtrong and "plethoric;" yet he afterwards makes the following Remark: "Beſides, the Pulſe in theſe Caſes ſinks oftentimes ſurpriſingly "after a ſecond Bleeding, nay ſometimes after the firſt, and "that even where I thought I had ſufficient Indications from "the Pulſe to draw Blood a ſecond time." See his *Eſſay on Fevers*, chap. viii. And Dr. *Pringle* obſerves, that in the ſecond Stage of the Diſorder large Bleedings have generally proved fatal, by ſinking the Pulſe, and bringing on a Delirium. *Obſervations on the Diſeaſes of the Army*, part III. chap. vii. ſect. V.

intended

intended giving the Bark, as ſhall be mentioned afterwards; for under other Circumſtances, if the Blooding was repeated, and other Evacuations uſed freely, I always obſerved that it did Harm, and was apt to ſink the Patient too much; as Dr. *Huxham*, Dr. *Pringle*, and other good Practitioners, have remarked.

After Bleeding, if the Patient was coſtive, or complained of Gripes, he had a Doſe of Rhubarb, or Salts, or a laxative Clyſter; but where there was much Sickneſs of the Stomach, we gave a gentle Emetic (*b*) in the Evening, and the Purge next Morning. And

(*b*) Dr. *Pringle* adviſes giving a Vomit, by way of Prevention, on the firſt Appearance of the Symptoms, and at Night to force a Sweat, by giving a Drachm of Theriac with ten Grains *Sal volat. Corn. cervi*, and ſome Draughts of Vinegar-whey, and to repeat the ſame the following Night; and ſays, he has often ſeen thoſe Symptoms removed which he apprehended to be Forerunners of this Fever received by Contagion; but previous to Vomits, or Sweats, if the Perſon be plethoric, it will be neceſſary to take away ſome Blood. *Obſerv.* part III. ch. vii. ſect. 5. Dr. *Lind*, in his *ſecond Paper on Fevers*, p. 66. ſays, "To all who are ſuppoſed to be infected by Fevers, during "this Stage of Rigours, a gentle Vomit is immediately "to be exhibited before the Fever be formed, and before the "Fulneſs or Hardneſs of the Pulſe renders its Operation dan-"gerous.

And if in the Courſe of the Diſorder the Sickneſs and Nauſea returned, attended with Griping and Coſtiveneſs, or very fetid looſe Stools, theſe Medicines were repeated, and a gentle Opiate given in the Evening after their Operation.

After Evacuations, if the Pulſe kept up, we commonly gave nothing but the ſaline Draughts, with the *Pulvis contrayervæ*, or ſome temperate Medicine, for the firſt Day or two. As ſoon as we could diſtinguiſh the Fever to be of the malignant kind, and that the Pulſe rather ſunk, we joined ſome of the Cordials to the ſaline Medicines, and allowed the Patient

" gerous. If the Vomit be delayed too long, and eſpecially if " Bleeding muſt precede it, the moſt certain and favoura- " ble Opportunity of procuring Safety for the Patient is " paſt. —— That he has found it equally ſerviceable in " preventing Relapſes, when it is given at the Return of the " Shiverings." A looſe Stool, or two, ſhould be procured by the Emetic or Clyſters, and he adviſes Sweating immediately after, in the manner recommended by Dr *Pringle*. At other times " he gave five Grains of Camphire every four " Hours, with large Draughts of Vinegar-whey. Eight " Perſons in ten, he ſays, got quite well by this Treatment."

I have never had ſufficient Opportunities of trying this Method of Prevention, to determine any thing certain about it; but it may be worth while to practiſe it.

more

more or leſs Wine, according to the Degree of the Fever. Dr. *De Haen* has found Fault with Dr. *Pringle* and Dr. *Huxham*, for adminiſtering cordial Medicines and Wine in the low State of this Fever; but nothing anſwered ſo well with us as theſe Remedies under ſuch Circumſtances; and I have frequently ſeen every Symptom changed for the better by their Uſe; and even when I gave the Bark, in the Manner recommended by *De Haen*, I often found it neceſſary to join the free Uſe of Wine(*i*), Cordials

(*i*) *Petrus a Caſtro*, in his Account of a Petechial Fever, which was frequent at *Verona*, tells us, that the Sick had a great Thirſt, and an Averſion to Meat, but all of them had the ſtrongeſt Deſire for Wine, and were perpetually aſking for it, even thoſe who at other Times uſed to be very temperate; and that this proceeded from an Inſtinct of Nature, which wanted ſomething to ſupport the Strength. *De Feb. Malig.* ſect. iii. chap. 26. Dr. *Huxham*, in his *Eſſay on Fevers*, has the following very judicious Remark on the Uſe of Wine: "In this View, and in "thoſe above-mentioned, I cannot but recommend a generous red "Wine as a moſt noble, natural ſub-aſtringent Cordial, and perhaps Art can ſcarce ſupply a better. Of this I am confident, "that ſometimes at the State, and more frequently in the Decline of putrid Malignant Fevers, it is of the higheſt Service, "eſpecially when acidulated with Juice of *Seville* Orange or "Lemon. It may be alſo impregnated with ſome Aromatics, "as Cinamon, *Seville* Orange Rhind, red Roſes, or the like, as "may

Cordials and Bliſters (*k*), in order to ſupport the Patient's Strength.

" may be indicated, and a few Drops of *Elix. Vitrioli* may be " added. Rheniſh and French White Wines, diluted, make a " moſt ſalutary Drink in ſeveral Kinds of Fevers, and generous " Cyder is little inferior to either. The *Aſiatics*, and other " Nations, where peſtilential Diſorders are much more riſe " than with us, lay more Streſs on the Juice of Lemons in " theſe Fevers than on the moſt celebrated *Alexipharmac.*" Chap. viii. ſecond Edit. p. 123, 4.

Acid and aceſcent Liquors have very juſtly been recommended and uſed by moſt late Practitioners, in this as well as in other malignant Diſeaſes. Vinegar-whey, Barley-water acidulated with Lemon-juice, and ſuch other Liquors, make good Drinks for the Sick; but we were obliged, for the moſt part, to uſe the vitriolic Acid for acidulating the Patient's Drink, as it was the eaſieſt procured and carried about with the Flying Hoſpital.

(*k*) If the preventive Method does not ſucceed, Dr. *Lind* adviſes to have recourſe to Bliſters; and ſays, that ſixteen out of twenty will next Morning be free of the Fever. But adds, this is ſaid, provided the Source of their Infection be not ſo highly poiſonous as it was in the Garland Ship, or in other ſuch violent Contagions. Dr. *Pringle* mentions his having applied Bliſters early, but without relieving the Head, or preventing any of the uſual Symptoms. I have often ordered Bliſters pretty early in the Diſorder; and though I have frequently found them of uſe in keeping up the Pulſe, and relieving the Head, and other Symptoms, yet I never ſaw them have ſuch an immediate Effect as Dr. *Lind* mentions.

After reading the Treatiſes of Dr. *De Haen* and Dr. *Haſenohrl*, on this Fever, I reſolved on giving the Bark (*l*) in large Quantities, and found it to anſwer the Recommendations given by theſe Gentlemen; and ſhall relate here two or three Caſes, out of above a hundred and fifty, in which I gave it.

I. *Robert Wilſon*, of the Second Regiment of Foot Guards, on the 19th of *February* 1761, was ſeized with a Shivering and Coldneſs, ſuc-

(*l*) It is long ſince the *Peruvian* Bark has been uſed by Practitioners in Malignant Diſorders, though I do not know that any body gave it in this Fever to the Amount of an Ounce per Day, before Dr. *Haen* and Dr. *Haſenohrl*. Dr. *Ramazini* mentions its having been tried in the Petechial Fever, in the Years 1692, 3, 4. And in a Treatiſe on the Plague in the *Ucrane*, publiſhed at *Petersburgh*, in the Year 1750, we are told, that in the *French* Tranſlation of the Philoſophical Tranſactions for the Year 1732, there is a Note to p. 264, telling, that Mr. *Amyand* informed the Acadamy of Surgery at *Paris*, that Mr. *Ruſhworth*, Surgeon, had wrote to Sir *Hans Sloane*, on the 23d of *May* 1723, that when he was Surgeon to a Ship, in the Year 1694, he had cured ſome Men ill of the Malignant Fever, attended with peſtilential Buboes, by means of the *Peruvian* Bark. Dr. *Huxham* has recommended a Tincture of the Bark; and Dr. *Pringle*, a ſtrong Decoction of it, with ſome of the Tincture, in theſe Malignant Fevers.

ceeded

ceeded with Heat, Thirſt, a ſhort dry Cough, Difficulty of Breathing, Head-ach, and ſlight Stitches in his Breaſt; ſome Blood was taken away, which was ſizy, and he was ordered two Ounces of the *Sperma Ceti* Mixture, with the *ſpiritus mindereri*, every two or three Hours. He continued without any manifeſt Alteration in the Symptoms, till the 21ſt, when a Number of dun Petechiæ appeared all over his Body, particularly on his Breaſt. The Stitches and Cough were then much eaſier, and he had his Medicines as before. On the 22d, he was ſeized with a Delirium, and was ſomewhat comatoſe; when he was ordered a Drachm of the Bark every ſix Hours. The 23d, the comatoſe Symptoms had increaſed, and he had ſlight Twitchings of the Tendons, a dry brown-coloured Tongue, and a Faultering in his Speech. The Bark was continued, with the Addition of two Spoonfuls of Mountain Wine every two Hours. On the 24th, he had ſeveral looſe Stools. The 25th, he was ſtill looſe, and went on as before, with the Addition of ſix Grains of the *Pilulæ ſaponaceæ*

ceæ in the Evening. The 26th, the Petechiæ were not ſo apparent as before, but he had ſtill the nervous Symptoms, and his Breathing grew more difficult; and therefore a Bliſter was applied between his Shoulders, and his Medicines continued; as they were likewiſe on the 27th, without any Alteration in the Symptoms. On the 28th, his Tongue became moiſter, and the Pulſe, which had been low and quick the four preceding Days, became fuller and ſlower. On the 29th, he was much more ſenſible, his Tongue more moiſt, and the Twitchings of the Tendons much leſs; and in the Evening he fell into a profuſe Sweat, which laſted all the 30th. On the 1ſt of *March*, his feveriſh Symptoms were much abated, his Pulſe was calmer, his Skin moiſt, his Drought leſs, and his Urine dropt a plentiful Sediment. On the 2d, his Fever was almoſt entirely gone, but he had ſtill a Cough, and ſpit up a viſcid Matter. He was ordered to go on as before, with the Addition of two Spoonfuls of the *Sperma Ceti* Mixture, and the *Spiritus Mindereri*, when his

his Cough was troubleſome. He followed this Courſe till the 7th, when, his Cough and Fever being gone, he was ordered a Doſe of Tincture of Rhubarb; after which he recruited his Strength daily, without the Aſſiſtance of any more Medicines.

II. On the 5th of *March* 1761, *Thomas Stagg*, of the Second Regiment of Foot Guards, was ſeized with the ſame Symptoms as *Robert Wilſon* had been in the Beginning of his Fever, but in a more violent Degree. He was blooded to about twelve Ounces, and was ordered a ſaline Draught every ſix Hours. On the 6th, the Blood, which had been drawn the Day before, had thrown up a ſlight Buff; it appeared to contain but a ſmall Proportion of Serum, and the Craſſamentum was of a looſe Texture. The feveriſh Symptoms had increaſed, with the Addition of a Delirium: pergat. On the 7th, the Delirium was grown more violent, ſo that he could ſcarce be kept in Bed; his Breathing was difficult, his Eyes red and florid: A Bliſter was applied to his Back, and the ſaline Mixture continued. On the 8th, there was no Alteration in the Courſe of that Day; but

being lower towards Night, Blisters were applied to his Legs, and he was ordered to have a Pint of Wine allowed him in twenty-four Hours. On the 9th, the Petechiæ appeared over his whole Body, of a broad dunnish kind; his Breathing became easier, and his Pulse stronger, though the Delirium was still as bad as before: He was ordered a Drachm of the Bark every fourth Hour in a saline Draught. On the 10th, the Bark gave him several loose Stools, but the Petechiæ were of a more florid Colour; the Delirium was less, and his Tongue moist, and therefore he was ordered to continue the same Medicines as the Day before, with the Addition of ten Grains of the *Pilulæ saponaceæ* in the Evening. The 11th Day, he fell into a fine breathing Sweat, his Pulse became fuller and slower, and the Delirium abated: p. The 12th, his Pulse was regular, and the Delirium gone, and he was much inclined to sleep. The 13th, after a calm Sleep, which had lasted twelve or fourteen Hours, he became quite free of Fever. After this he continued the Use of his Medicines

cines for ſome Days, and recovered his Health and Strength daily.

III. On the 23d of *May* 1761, *Lionel Thompſon*, of the Firſt Regiment of Foot Guards, was ſeized with all the Symptoms of a Peripneumony, attended with a high Fever, for which he was ordered to be blooded. After loſing eight Ounces of Blood, he fell into a fainting Fit; on recovering out of which, his Breathing being ſtill much affected, he had a Mixture made of four Ounces of the *Lac Ammoniacum*, and one of the *ſpiritus mindereri*, of which he was deſired to take two Spoonfuls every four Hours. The 24th, the Symptoms the ſame: He complained of having had no Stool for ſome Days, and took half an Ounce of the *ſal catharticum amarum*, which gave him two looſe Stools. On the 25th, his Pulſe was ſmall and quick, his Breathing difficult; he was low, and had a ſlight Delirium: A large Bliſter was applied between his Shoulders, and the Medicines continued. On the 26th, in the Morning, the Petechiæ appeared, and his Breathing was freer: He was ordered a Drachm of the Bark, in a ſaline Draught, every

four Hours. The 27th, the Pulſe better: p. The 28th, was more ſenſible, and had a kindly warm Moiſture all over the Skin. The 29th, the Fever was much abated, and his Tongue, which was before parched and dry, became moiſt and white: He continued the Uſe of the Cortex for three Days more, which removed the Fever; and being coſtive, he took a Doſe of the Tincture of Rhubarb. After this he uſed the Bark for a few Days longer, and got perfectly well.

After giving the Bark (*m*) with Succeſs, in the two firſt of the Caſes mentioned, and to two young

(*m*) The *Peruvian* Bark has not only been found uſeful in this Malignant Fever, but has likewiſe been recommended in the Plague. See *Morton Oper. Append. ſecund. Exercitat. Hiſt. Febr. Ann.* 1658, *ad. an.* 1691. *complexa.* In the Small Pox, ſee *Medical Eſſays*, vol. V. art. x. and has been found ſerviceable in the putrid Diſorders of the *Weſt-Indies*, as taken Notice of by Dr. *Hillary*; and in the malignant ulcerous ſore Throat in this Country, as Dr. *Wall* and others have obſerved. And in thirty-five Caſes of the malignant ulcerous ſore Throat, in which I gave it, joined with Cordials, and the Uſe of Acids, I did not loſe one Patient. Nine of them were ſtrong People, and had plethoric Symptoms, and were blooded in the Beginning; and ſeven of them were coſtive, and took a Doſe of gen-

tle

young Gentlemen, Mates of the Hoſpital, who had caught the Fever from their Attendance on the Sick, I gave it to above a hundred and fifty at *Paderborn*, and elſewhere, during my Attendance in the Military Hoſpitals in *Germany*; and although it did not anſwer in every Caſe, yet it was found to have a better Effect than any other Remedy that was tried. We joined different Medicines with it, according to the State of the Patient We gave the *Confectio cardiaca*, *Rad. ſerpent. Virg.* and other cordial Medicines, and Wine, when the Pulſe was low; *Oxymel ſcilliticum*, and other Pectorals, when

tle laxative Phyſic before taking the Bark. The reſt had no Symptoms which ſeemed to require theſe Evacuations. However, it ought to be obſerved, that this is a Diſorder of the malignant kind; and that although ſome well-timed gentle Evacuations may be ſerviceable in the Beginning, before giving the Bark; yet too free, or even gentle Evacuations, injudiciouſly made, will ſink the Patient, and infallibly do Miſchief.

The free Uſe of the Bark has long been found ſerviceable in Mortifications and foul Sores, where the Juices tend too much to the Putreſcent; and has been ſtrongly recommended by Mr. *Ranby*, Serjeant Surgeon to his Majeſty, in the Cure of Gunſhot Wounds. See his *Treatiſe on Gunſhot Wounds*.

the

the Breathing was difficult; Opiates, where the Patient was inclined to be too looſe; the *ſpiritus mindereri*, and other Diaphoretics, when we wanted to promote a free Perſpiration; and we applied Bliſters as Occaſion required.

When the Patient was ſtrong, the Pulſe quick and full, the Eyes looked red, and the Breathing was difficult, after the Petechiæ appeared; I took away more or leſs Blood before giving the Bark. Moſt Practitioners of late Years have been againſt Bleeding in this Stage of the Diſorder; but truſting to the Aſſurances given by Dr. *Haſenohrl* of its being ſafe, nay of Advantage to bleed at this Time, if the Symptoms required it, I ventured upon it, and found it to be of the greateſt Service, in many Caſes, in the Hoſpitals at *Paderborn* and elſewhere; and particularly in two Caſes at *Bremen*, and one at *Oſnabruck*, where it gave immediate Relief, and ſeemed to ſhorten the Diſeaſe much. One of the Patients at *Bremen*, *Robert Ellis*, belonged to an Independant Company; the other, *Francis Hamſtan*, of the 24th Regiment, had formerly had his Skull fractured, and took the Fever, while he was in the Hoſpital, for violent Headachs,

achs, which he had been ſubject to, at times, ever after his Skull had been fractured. The Caſe at *Oſnabruck* was a Nurſe of the Hoſpital, whoſe Name was —— *Andrews*, a Woman about twenty-five Years of Age, who, after attending a Dragoon in the Small Pox, and ſuckling at the ſame time her own Child, then in the ſame Diſorder, was, on the 18th of *January* 1763, attacked with a Fever. I ſaw her for the firſt time on the 20th, and found her Pulſe quick, full, and ſtrong. She complained of a violent Head-ach; for which ſhe was blooded, and took the ſaline Mixture, with Nitre and Contrayerva. Next Day, the 21ſt, her Blood appeared very ſizy, and ſhe complained of having been coſtive for ſome Days. We gave her immediately an Ounce of the *ſal catharticum amarum*, which operated well. She continued much in the ſame Way the 22d, and had ſome looſe Stools that Day. Being ſtill inclined to be looſe the 23d, inſtead of her former Medicines, ſhe was ordered the *ſpiritus mindereri* Mixture, with Mithridate. This checked the Purging, but did not ſtop it entirely. The Fe-

ver

ver went on, without any remarkable Change, till the 27th; at which time the Petechiæ appeared all over her Body, attended with a Redneſs of the Eyes, and a violent Oppreſſion and Pain of her Head, and a quick Pulſe. I ordered ſix Ounces of Blood to be taken away immediately, and a large Bliſter to be applied to her Back, and, at the ſame time, ordered her a cordial Mixture, with half an Ounce of the Extract of the Bark in it, to be taken every twenty-four Hours. The 28th, her Pulſe was not ſo hard, her Head was much eaſier, the Redneſs of her Eyes was much leſs, and the Petechiæ had begun to die away. The Blood which was taken away the Day before, had a thin Buff at the Top, but the *Craſſamentum* underneath was of a dark Colour, and of a looſe Texture: p. On the 29th, ſhe told me that ſhe had had two or three looſe Stools, and ſhe was lower than the Day before; and therefore a Drachm of Mithridate, and two Drachms of the Tincture of Cinamon, were added to her cordial Mixture, with the Cortex; and ſhe was allowed half a Pint of Red Wine, mulled with

Cinamon,

Cinamon, *per* Day. 30th, Her Tongue rather moiſter than the Day before; and ſhe not ſo low, but ſhe was ſtill inclined to be looſe; and therefore was ordered the anodyne Draught at Nights, and to continue the other Medicines. 31ſt, She was ſtill inclined to be looſe; but her Pulſe kept up, her Tongue was moiſter, and ſhe found herſelf pretty eaſy: p. *Feb.* 1ſt, Her Pulſe pretty ſtrong, and ſhe found herſelf much cooler, and freer from the Fever, and complained of a Dullneſs of Hearing. On the 2d, in the Morning, ſhe felt a warm Moiſture all over her Skin, which, about Noon, broke out into a profuſe Sweat, and continued till the 4th; when it went off, and her Urine let fall a copious whitiſh Sediment. She had then little or no Fever. The Dullneſs of Hearing ſtill continued, though it was much leſs than before. After this the Deafneſs went gradually away. She continued the Uſe of the cordial Mixture, with the Cortex, till the 12th, and recovered Strength daily. After this, ſhe had no other Medicine, except two Doſes of the Tincture of Rhubarb,

and

and was ſoon in good Health, and able to diſcharge her Duty as a Nurſe.

However, it ought to be obſerved, that we muſt not bleed ſo freely, in this or any other Stage of the Malignant Fever, as in acute inflammatory Diſorders, otherwiſe we ſhall ſink the Patient, and hurry him to his Grave; and that Bleeding can only take place with Safety and Advantage, under the Circumſtances abovementioned, immediately before giving the Bark freely; or where ſome accidental ſharp Pain in the Breaſt, or Bowels, or ſome other violent Symptom, may require it. They err equally, who recommend Bleeding freely in this Fever, with thoſe who entirely forbid its Uſe.

Although we found the Bark to be in general the beſt Remedy in this malignant Petechial Fever, yet it did not anſwer in every Caſe; for in ſome we found other Remedies had a better Effect: And therefore, when we obſerved that, notwithſtanding the Uſe of the Bark, the Patient ſunk, and the Symptoms grew worſe, we did not perſiſt obſtinately in its Uſe, but tried the Effect of other Medicines.

Towards

Towards the End of *May* 1761, two Soldiers in the Hoſpital, at *Oſnabruck*, were taken ill of this Fever; who, after uſing the Bark freely, and being allowed a Pint of Red Wine *per* Day, for ſome Days together, began to ſink, and had a Delirium and other bad Symptoms haſtening on: upon which I laid aſide the Uſe of the Bark, and ordered each of them a Bliſter to the Back, and to take a cordial Draught, with fifteen Grains of Muſk in it, every four Hours; and to have their Wine mulled with Cinamon; and although at that Time they were both ſo low that I ſcarce imagined they would live twenty-four Hours, yet next Day I found them greatly mended; and they had a kindly warm Moiſture all over their Skin, and the Pulſe had roſe conſiderably in both. By the Continuance of the ſame Medicine the feveriſh Symptoms gradually abated, and they both got well.

About the ſame time, having given the Bark freely for ſome Days, and applied a Bliſter, to another Patient, after the Petechiæ had appeared, I found him one Morning ſo low that his

Pulſe

Pulſe could ſcarce be felt. He could not ſpeak; he had a Delirium, and rather a Tremor than a *ſubſultus tendinum*, and he had all the Appearance of a dying Man. However, as he ſtill ſwallowed whatever was put in his Mouth, I changed the Bark Mixture for Draughts, which contained a Scruple of the *confectio cardiaca*, and ſeven Grains of the *ſal vol. corn. cerv.* (*n*) each,

(*n*) Dr. *Huxham*, in his *Treatiſe on the ulcerous ſore Throat*, p. 54, &c. condemns the Uſe of the volatile alcaline Salts, in Fevers of the putrid, peſtilential, or petechial kind, as being apt to heat too much, and to haſten the Diſſolution and conſequent Putrefaction of the Blood. However, I cannot help thinking that they are the beſt Remedies we can uſe on ſome particular Occaſions, even in this Fever; for we have no Remedy which gives ſuch a ſudden and briſk *Stimulus* to the Fibres as they do. And I have known many Caſes of Patients who were extremely low, and whoſe Pulſe was ſcarce to be felt, and others who were apt to fall into fainting Fits, who have been preſerved by large and repeated Doſes of theſe Salts, and the free Uſe of Wine, and aceſcent Liquors, to correct their alcaline Acrimony in the Blood. Though as ſoon as ſuch Patients had recovered from this low State, I laid theſe Medicines aſide; becauſe I cannot help agreeing with the Doctor in the Belief, that their continued Uſe will produce the Effects he mentions. For although it be true, that theſe Salts, when mixed with putreſcent Liquors, or with dead animal Subſtances, reſiſt Putrefaction,

each, and ordered one to be given immediately, and afterwards to be repeated every four Hours; and, in the Intervals, to give him frequently a Tea-cup full of Red Wine, mulled with Cinnamon; and to apply two large Blisters to his Legs. Next Day, his Pulse had rose; and by the Continuance of the same Remedies it became gradually fuller and stronger, and the third Day after he recovered his Voice; and a warm kindly Moisture which ended in a profuse Sweat coming on, the feverish Symptoms went off soon after, and he recovered his Health.

At *Bremen* there were two Men, one in *January*, and the other in *February* 1762, on whom the Cortex had but little Effect, who recovered by the free Use of Mixtures, with the *confectio cardiaca* and *rad. serpentariæ*, and

tion, and, like ardent Spirits and Vinegar (the other Products of Fermentation) check and put a Stop to that very Process which produced them: Yet it is also true, that, when mixed with the Blood of living Animals, they stimulate the Vessels, and increase the Heat and *Momentum* of the Blood, and dissolve it; and therefore I cannot but disapprove the continuing their Use longer than is immediately necessary.

of Wine, with the Application of large Blisters. Several Cases of this kind occurred in the Hospitals, where the Bark did not answer.

There is one thing to be observed with respect to Malignant Fevers, which is, that if ever they appear in large crowded Hospitals, unless we can thin the Wards, and procure a free Circulation of Air, and keep the Hospital and Sick extremely clean, the Fevers will continue to spread, and great Numbers will die; and even the most efficacious Remedies will have little or no Effect. And that when once the Infection is grown strong, it requires the greatest Care, and some Time, before it can be entirely got the better of. And that if a great number of Men, ill of this Fever, be kept in the same Ward, they will help to keep up the Infection; and therefore it is always proper, when it can possibly be done, to lay but a few of them in one Ward; not above one-third of the Number generally admitted.

Many of the Patients, towards the Height of this Fever, sooner or later, had a Purging, which seldom proved critical; and some were seized

ſeized with the Flux. A gentle *diarrhæa*, ſuch as did not ſink the Patient, was commonly of Service; but when violent, or a Dyſentery came on, the Caſe was always dangerous; for whatever ſtopped the Flux increaſed the Fever; and, if the Purging or Flux continued, it ſunk the Patient. Such Fluxes we treated in the Manner to be mentioned afterwards, when we come to the Hiſtory of the Dyſentery.

In this Fever, it was common for Patients to vomit Worms (*n*), or to paſs them by Stool, or, what was more frequent, to have them come up into their Throat and Mouth, or ſometimes into their Noſtrils, while they were aſleep in Bed, and to pull them out with their Fingers. The ſame Thing happened to moſt of the *Britiſh* Soldiers, brought to the Hoſpitals for other feveriſh Diſorders as well as this. Dr. *Pringle* (*o*),

(*n*) Some Men paſſed only one Worm; others, two or three; ſome, ſix or ſeven; and one Man, of the Guards, in *January* 1763, after paſſing three by Stools in the Courſe of a Fever of this Kind, diſcharged fourteen more upon taking a Doſe of Rhubarb and Calomel after the Fever was over.

(*o*) *Obſervations on the Diſeaſes of the Army*, part iii. chap. iv. Note to p. 213. third Edition.

when he mentions Worms being obſerved in this Fever, ſeems to embrace *Lanciſius*'s Opinion; and believes that theſe Worms are not the Cauſe of the Fever; but being lodged in the Inteſtines, before the Fever comes on, they are annoyed by the Increaſe of the Heat, and the Corruption of the Humours, in the Cavity of the Inteſtines of Perſons labouring under Fevers, eſpecially of the putrid Kind; and ſo they begin to move and ſtruggle to get out. This ſeemed evidently to be the Caſe with many of the Patients we had; though in ſome the Worms ſeemed to have given Riſe to the Fever, which the bad State of the Patient's Humours, or the infected Air of Hoſpitals, determined to be of this Kind. In many, the Fever leſſened, or went off entirely, ſoon after; and they were no more affected with Symptoms of Worms. But ſome notwithſtanding were ſubject to frequent Sickneſs, Pain of the Stomach, and Uneaſineſs in the Bowels, and diſcharged ſome Worms from Time to Time. Others had frequent Relapſes into Fevers, which ſeemed to be owing to the Irritation of theſe Inſects.

It

It is no Wonder that Worms of the round Kind ſhould be productive of troubleſome Symptoms, and occaſion theſe Relapſes; ſince we know that they have ſometimes perforated the Inteſtines, and been found in the Cavity of the Abdomen (*p*).

As ſoon as we obſerved a Patient to be troubled with Worms, if his preſent Situation did not prevent it, we gave twenty-five or thirty Grains of Rhubarb, with five or ſix Grains of Calomel; and if there was much Sickneſs, we likewiſe gave an Emetic; which, in more than one Caſe, brought up two or three Worms of the round Kind, and gave great Relief. But where the Fever was violent, we were obliged to neglect this Symptom of Worms for the preſent; and when the Fever was over, if there ſtill

(*p*) See *Hoffman*'s Works, vol. III. chap. x. *River. Obſerv. commun.* Obſ. 13. *of Obſervations found in a Library. Bonetus's Sepulchret. anatom.* tom. II. *Gualther van Doeveren's Inaugural Diſſertation de Vermibus inteſtinalibus*, publiſhed at *Leyden*, 1753; and *Lanciſi*'s Works; for Caſes where the internal Coats of the Stomach, and Inteſtines, have been eroded, and all the Coats perforated by Worms of the round Kind.

remained any Symptoms of Worms, we gave the purgative Medicine once or oftener, and in the Intervals gave the *pulvis ſtanni*, or an Infuſion of Camomile Flowers ; and in ſome Caſes, oily Medicines. By theſe Means moſt of the Patients got well and recovered their Health, and ſeemed to be freed, at leaſt for the preſent, from theſe troubleſome Inſects ; though a few connued to complain of Sickneſs, and other Symptoms of Worms, for ſome Time afterwards.

What was the Cauſe of the Army's being ſo much troubled with Worms of the round Kind, is not eaſy to aſcertain ; unleſs it was owing to the great Quantity of crude Vegetables, and Fruits, which the Soldiers eat in the Courſe of the Summer and Autumn, and to the bad Water they were often obliged to drink.

In the Malignant Fever at *Paderborn*, many complained of a Dyſuria, and ſome of a Suppreſſion of Urine, eſpecially towards the Decline of the Fever ; and others, of a Scalding and Pain in making Water, though they had no venereal Complaint. Theſe Symptoms appeared in other Places, but not near ſo frequently as at

Paderborn.

Paderborn. Decoctions of Gum Arabic, with ſome of the *ſpiritus nitri dulcis*, and oily Mixtures, and Opiates, commonly gave immediate Relief, and ſoon removed this Complaint.

One of the firſt ſalutary Symptoms which moſt generally appeared in thoſe who recovered, was a Dullneſs of Hearing, or Deafneſs (*q*); which came on about the Height of the Fever, and continued a longer or ſhorter Time, generally till the Fever was entirely gone; and ſometimes for a conſiderable Time afterwards. For the

(*q*) *Riverius* tells us, that, according to *Hippocrates*'s Doctrine, Deafneſs is a very dangerous Symptom in the Beginning of acute Diſorders, though it be a good Omen, and portends Health, when it does not appear till the Height of Fevers, eſpecially thoſe of a malignant Kind; and adds, that he himſelf has a thouſand Times obſerved, that thoſe labouring under this Fever have recovered, when this Symptom of Deafneſs came on at the Height (*in ſtatu*) though the other Symptoms threatened much Danger. *Prax. Medic.* lib. XVII. ſect. iii. cap. i. p. 451.

This Symptom of Deafneſs occurs in other Fevers as well as in this, and often proves a good Symptom in them likewiſe, as I have frequently obſerved. Two remarkable Examples of which I had under my Care in St. *George*'s Hoſpital, in the Year 1759. On the 17th of *January* 1759, *James Donaldſon*, a young Man of nineteen Years of Age, was admitted into the Hoſpital for a Fe-

the moſt Part we did nothing for this Complaint, and it went off as the Patient recovered his Strength. When it continued long, Bliſters applied behind the Ears, or on the Neck, and waſhing the *meatus auditorius* with the emollient Decoction, in which a ſmall Quantity of Soap was diſſolved, proved of Service.

Swellings of the parotid Glands appeared in many Subjects, towards the Decline of the Fever, which came to Suppuration, and proved critical. In two only, out of thoſe I attended while in *Germany*, they came on early in the Fe-

ver, attended with a Stupor and a Delirium, a parched dry Tongue, and other Symptoms of a Fever of the inflammatory Kind, for which he had been blooded, and uſed other Evacuations. On the 19th, after the Application of a Bliſter, he was ſeized with almoſt an entire Deafneſs; after which, all his other Symptoms became milder, and he mended daily, and was entirely free from the Fever by the 30th. On the 10th of *April* 1759, a Youth, *John Young*, fifteen Years of Age, was admitted into the ſame Hoſpital for a Fever, which had already continued fourteen Days. His Speech was affected, and he had entirely loſt the Uſe of his Limbs, was delirious, and had other bad Symptoms. On the 12th, his Hearing became exceedingly dull, and he recovered daily afterwards, and was diſcharged, cured, the 2d of *May*, having recovered the Uſe of his Legs as well as got free of the Fever.

ver, but did not ſuppurate. Both Patients died; all the reſt recovered, except one old Man, an Invalid at *Bremen*; who, after having one Swelling appear on the right Side, which came to Suppuration, and ſeemed critical, relapſed into the Fever; and another formed on the other Side, which came likewiſe to Suppuration, and the Fever ceaſed, after having reduced him very low; but the great Diſcharge from the Sores waſted him gradually, and he died hectic in about a Month after the Fever had left him (*r*).

(*r*) But although theſe parotid Swellings were in general ſo favourable with us, we are not to imagine that this will always be the Caſe: for *Riverius*, though he ſpeaks of theſe Swellings proving for the moſt part critical; yet he tells us, that, in the Year 1623, this Fever was epidemic at *Montpelier*, and that almoſt one half of the Sick died; and particularly, that moſt of thoſe who had Swellings of the parotid Glands appearing about the 9th or 11th Day, were carried off within two Days of their Appearance. Having attended ſeveral who died from the Swellings not coming to Suppuration, he began to conſider in his own Mind, what might be the Cauſe of their Death, and concluded, that it was owing to there being a greater Quantity of morbid Matter in the Blood than the Part was able to contain, and that Evacuations by blooding and purging were the only Remedies which were likely to give Relief; and therefore, in the firſt Caſe of this Kind, in which he was afterwards conſulted, he ordered

As ſoon as theſe Swellings of the parotid Glands appeared, we endeavoured to bring them forward to Suppuration, by the Application of emollient Cataplaſms, or of gummous Plaiſters; and had them opened as ſoon as a Fluctuation of Matter was to be felt, and afterwards treated them as common Abſceſſes. *Riverius* (*s*) very juſtly obſerves, that when ſuch Tumours encreaſe in ſuch a Manner as to endanger Suffocation, they ought to be opened before they come to Maturation; and Dr. *Pringle* (*t*) deſires us not to wait for a Fluctuation of Matter, but to open the Abſceſs as ſoon as it can be ſuppoſed to have formed.

dered three Ounces of Blood to be taken away, notwithſtanding the Patient was ſo low that the Surgeon was afraid he would have died in the Operation: The Pulſe roſe on bleeding, and he ordered four Ounces more to be taken in three or four Hours afterwards: The Pulſe roſe ſtill more, and he ordered a Doſe of Sena and Rhubarb to be taken next Day, and the Patient recovered. And he adds, that all thoſe who were treated in this manner got well. *Prax. Med. Lib.* XVII. *ſect.* iii. *cap.* 1.

(*s*) Ibid.

(*t*) *Pringle's Obſervations on the Diſeaſes of the Army*, Part III. chap. vii.

In

In *February* 1761, three Patients in the Decline of this Fever had Buboes formed in the Groin, which proved critical. At firſt, on obſerving them, I ſuſpected them to be venereal; but on examining the Patients, they obſtinately denied their having any Reaſon to ſuſpect any ſuch Cauſe; and the favourable Manner in which they healed without the Appearance of any other venereal Symptom, made me believe what they aſſerted to be true; eſpecially as ſuch People are not ſhy in owning Complaints of that Kind. The firſt Patient I ſaw who had a Bubo in the Decline of one of theſe Malignant Fevers, was a Woman, Wife to a Soldier of the thirty-ſeventh Regiment of Foot; ſhe had a Child at her Breaſt, and her Huſband was living with her at the Time ſhe was taken ill of the Fever, and neither of them had the leaſt venereal Complaint. In a few Days afterwards, two Soldiers in other Hoſpitals, towards the Decline of very bad Petechial Fevers, had likewiſe Buboes formed in the Groin, without any Suſpicion of a venereal Taint. Except in theſe three, I did not ſee any critical Buboes appear in this Fever while I was with the Troops in

Ger-

Germany; tho' Mr. *Lovet*, who ſerved as a Mate to the Hoſpitals, and who was at *Hoxter*, where we had another Hoſpital eſtabliſhed, while I was at *Paderborn*, told me, that, in the Beginning of the Year 1761, they had ſeveral Men in the Hoſpital ill of this Fever, who had critical Buboes formed in the Groins and Armpits (*u*).

About the ſame Time that theſe Buboes appeared, ſeverals towards the Decline of this Fever complained of a Pain all along the Spermatic Chord; and ſoon after a Swelling of the Teſticle appeared (*x*). However, this Complaint was not peculiar to thoſe who had the

(*u*) This Symptom of Buboes is taken Notice of by Authors, but does not ſeem to be ſo frequent as many of them would make us believe. Neither Dr. *Huxham* nor Dr. *Pringle* mention their having ſeen ſuch Buboes; and Dr. *Lind* ſays, that he never ſaw them till the Beginning of the Year 1763.

(*x*) *Hippocrates* takes Notice of Swellings of the Teſticles in Fevers. He tells us, that a Man from Alcibiades had his left Teſticle ſwell before the Criſis of a Fever. *See his Second Book on Epidemics*, ſect. ii. And he mentions this Symptom as a Criſis in the ardent Fever. *See his Book on Criſes*, ſect. xi. — And Dr. *Antonio Lizzari*, in a Treatiſe which he publiſhed on the *Acute Diſeaſes which were frequent at Venice, and all over Italy, in the Years* 1761, 62, tells us, that Abſceſſes of the Scrotum and Teſticles frequently followed the Meaſles.

Fever;

Fever; for others recovering from Fluxes, and other Diſorders, were likewiſe affected with ſuch Swellings. I did not obſerve any Symptom of this Kind in Fevers while I was with the Troops in *Germany*, except in *January*, *February*, *March*, and *April* 1761. By Bleeding, and applying emollient Fomentations and Cataplaſms, and bathing the Parts with *ſpiritus mindereri* on the firſt Attack of the Pain, the Swelling of the Teſticle was prevented; but where no Mention was made of this Pain till the Swelling had already begun, it commonly ended in a Suppuration of the Scrotum or Teſticle, which healed very kindly. We had no Reaſon to ſuſpect any venereal Taint in any of them.

Many, while recovering from this Fever, were ſeized with an Ophthalmia, or Inflammation of the Eye; for the moſt part of one Eye only, ſometimes of both. When the Patients were ſtrong, they were blooded, and had Bliſters applied behind the Ears; and ſometimes, where the Pain was great, had Poultices of Bread and Milk applied to the inflamed Eye; which, with the Aſſiſtance of ſome cooling Phy-

ſic,

ſick, commonly removed this Complaint; tho' in ſome obſtinate Caſes we were obliged to repeat the Evacuations, to apply Leeches to the Temples; and after the acute State of the Diſorder was paſſed, to order the Eye to be waſhed frequently with the Collyrium vitriolicum, or Collyrium Saturninum, before we got the better of this Complaint. However, it ought to be obſerved, that if theſe aſtringent Collyria were uſed too ſoon, they did hurt. When theſe Ophthalmias were neglected in the Beginning, the Inflammation frequently roſe to a great Height, and left an Obſcurity or Philm over the Cornea, which remained an Impediment to the Sight not to be removed.

Towards the Decline of theſe Fevers, and very often during the Courſe of them, many complained of Pains in their Feet and Toes, which ſometimes ended in Mortifications, eſpecially where the Patients lay in very cold Wards. For the moſt Part, the Mortification extended no further than the Ends of the Toes, tho' in ſome it ſpread over the Feet, and in two or three advanced up the Leg. Several loſt one

or more Toes; and in *February* 1761, one Man loſt Half of each Foot; another loſt both Feet, and Part of each Leg. Both got the better of the Fever, tho' the Man who loſt both Feet languiſhed a long time afterwards. Theſe Pains of the Feet and Toes, and the Mortifications which followed, were for the moſt part owing to the Patients being expoſed to too much Cold while they were very weak, the Circulation languid, and the Juices vitiated by a putrid Diſtemper; by which means the Veſſels were rendered incapable of carrying on the Circulation in their extreme Branches (*y*).

As ſoon as the Sick began to complain of theſe Pains of the Toes and Feet, I found the beſt Remedy to be, the Bathing of the Feet in

(*y*) Theſe Pains and Mortifications of the Feet and Toes were not confined to thoſe who were brought low by malignant Fevers; for, during the very hard Froſt in the Beginning of the Year 1763, many of the Patients who lay in very large open Wards in the Hoſpital at *Oſnabruck*, were affected in the ſame Way. One Man had both Feet, and Part of each Leg, compleatly mortified, and died in about nine Days after the firſt Appearance of the Mortification. One loſt half of one Foot, and ſome Toes of the other; and the third loſt the firſt Joint of ſome of his Toes, and the Ends of others.

warm

warm Water, or in warm aromatic Fomentations; and, after keeping the Feet for ſome time in theſe warm Liquors, to dry them well, and then rub them with the *linimentum ſaponaceum*, or *linimentum volatile*, and wrap them up in Flannel. And if ever any Lividneſs or Redneſs appeared on the Parts, we gave plentifully of the Cortex and Cordials, if not contra-indicated by the other Symptoms. When Veſicles aroſe on the Part, and a Gangrene formed, we directed the Parts to be ſcarified, and proper Dreſſings to be applied, while warm aromatic Fomentations and Cataplaſms were uſed.

In *January* 1762, one Patient, ill of the Petechial Fever at *Bremen*, had a Lividneſs and Blackneſs, threatning a Mortification, which appeared at the End of his Noſe. I expected for ſome Days, that, if he recovered, he would loſe Part of his Noſe; but, by giving him large and repeated Doſes of the *cortex* and *confectio cardiaca*, in a Mindereri Mixture, and allowing him the free Uſe of Wine, its further Progreſs was prevented; and as the Patient got clear of the Fever, the Noſe recovered its natural Colour,

lour, and only the ſcarf Skin peeled off from the End of it.

When the Fever continued long, and reduced the Patients low, it was very common for the Back, and Parts on which the Weight of the Body reſted, to mortify. As ſoon as any thing of this Kind was obſerved, we ordered ſuch Parts to be covered with proper Dreſſings, and gave the Bark and Cordials freely; and took care to make the Patient change his Poſture; and by Pillows prevented as much as poſſible the Weight of the Body from reſting on that Part. By this Treatment, many recovered, where the Fever was on the Decline, and the Strength not too much exhauſted; even tho' a very large Surface of the Skin had mortified; but where the Patients were very low, and the Fever ſtill continued, or where it was complicated with a Flux, which kept them perpetually naſty, and exhauſted the Strength, it generally proved fatal.

Patients, who were reduced very low by this Fever, or by repeated Relapſes, were ſubject to oedematous Swellings; eſpecially of the Feet,

towards the Evening, after ſitting up all the Day. Theſe Swellings generally went away as the Sick recovered their Strength; but in ſome Caſes they continued obſtinate, and aſcended towards the Thighs; and in ſome ſpread all over the Body, and terminated in an univerſal Anaſarca.

When theſe Swellings were recent, and confined to the Feet and Legs, commonly the Bark joined to the lixivial Salts, or the Oxymel of Squills, or other Diuretics, and a Purgative once or twice a Week, removed them. In ſome, an Infuſion of Horſe-radiſh had a good Effect; in others, Sweats brought out by means of *Dover*'s Powder, or of the *guttæ antimoniales anodynæ*.

Sometimes theſe Swellings were very obſtinate, and reſiſted the Force of all internal Remedies. In ſuch Caſes, Punctures made in the Feet, or lower Part of the Legs, which furniſhed a Drain for the Water, had a good Effect. Bliſters applied to the Legs were of Service to ſome. When the Punctures were made, or the Bliſters applied, before the Patient's Strength was exhauſted, provided that he laboured

boured under no other Diſorder but theſe oedematous Swellings, which proceeded from Weakneſs, I never obſerved any bad Effects from them; tho' I uſed them both repeatedly in a Variety of Caſes. But if the Patient was very weak; or had a Hectic Fever or Purging; or other Diſorders, and the oedematous Swellings large; then oftentimes the great Diſcharge exhauſted his Strength, and a Gangrene and Death were the Conſequence.

One of the moſt remarkable Inſtances of the good Effects of Bliſters uſed in this Way, was in the Caſe of a Soldier at *Paderborn*; *Thomas Hope*, of the Second Regiment of Foot Guards, after a Fever of this Kind, was ſwelled all over, eſpecially about the Face and Neck, and had a Difficulty of Breathing: after having tried Variety of Medicines for this Complaint, without any Effect, he had a large Bliſter applied to his Back, and took the Cortex in a Mixture, with the Oxymel of Squills. As ſoon as the Bliſter began to diſcharge, the Swellings decreaſed; and were afterwards entirely removed by the Help of one or two Doſes

of Phyſic, and the continued Uſe of the Medicines before preſcribed. Three other Men in the Hoſpital at *Oſnabruck*, in *May* 1761, having oedematous Swellings of the Feet and Legs, which yielded to no internal Remedies, had Bliſters applied to their Legs, uſed the Cortex, with the lixivial Salts, two or three Times a Day, and a Purge every fourth Day; which removed the Swellings in a ſhort Time.

Some of the Soldiers, who had repeated Hoſpital Fevers, had their Blood ſo much broke down, as to be ſubject to profuſe Hæmorrhages from the Noſe; and ſome of them paſſed Blood likewiſe by Stool; which reduced them to a very low State, ſometimes attended with imminent Danger. In ſuch Caſes we found nothing to anſwer ſo well as to give freely of the Bark; to acidulate their Drinks with the *ſpiritus vitrioli*; to allow them as much Red Wine as the Strength and preſent Circumſtances could bear; and at the ſame Time to ſupport the Patient's Strength by a mild Diet, of light Digeſtion; as Water or Rice Gruel, Panado, weak Broth, and the like.

like. When there was a Tendency to a Diarrhœa, we were obliged to add ſome of the *electuarium diaſcordii* to the Cortex, and frequently to give an Opiate in the Evening. One Caſe, where this Method of Cure had a very remarkable good Effect, I had under my Care at *Paderborn*. A Soldier who lay in one of the lower Wards of the Jeſuits Hoſpital, after a Malignant Fever, attended with a Flux, uſed to bleed at the Noſe, to four, five, or ſix Ounces at a Time; and once or twice loſt near a Pint of Blood, of a dark Colour, very thin and watery, and of ſo looſe a Texture, that the grumous Part ſcarcely coagulated. This Evacuation brought him ſo low, that he could ſcarce turn himſelf in Bed; and his Pulſe might be ſaid rather to flutter than beat: By the continued Uſe of the Bark, and of Cordials, and Drinks acidulated with *ſpiritus vitrioli*, and ſome Spoonfulls of mulled Red Wine every two or three Hours, he was reſtored to Health and Strength. The only Accident which happened during the Cure, was a Threatening of a Looſeneſs, and the Return of his Flux; which however was ſtopt

by a Doſe of the *tinctura rhei*; by joining ſome of the *electuarium diaſcordii* with the Bark, and giving an Opiate in the Evening.

Putrid Malignant Fevers, attended with Eruptions, are taken Notice of by *Hippocrates* (*z*), and other antient Authors (*a*); but whether they meant that particular Sort of Eruption which we now call Petechiæ, is uncertain; as their Deſcriptions are not clear enough to diſtinguiſh it from the Miliary and other Kinds. But ſince the Year 1500, we have had many accurate Accounts of Fevers of this Kind, which have appeared in different Parts of the World: from all which it appears that ſuch Fevers generally take their Riſe either from ſome antecedent Acrimony of the Blood; or, what is more frequent, from ſome Source of Corruption or Contagion; from the Uſe of putreſcent animal Food, and a Want of freſh Vegetables and aceſcent Liquors; from

(*z*) *Hippocrat.* lib. ii. popul. ſect. iii. text. 2.

(*a*) *Aetius Tetrab.* ii. ſect. i. cap. 129. *Actuar.* lib. i. cap. 23.

the

the putrid Steams of corrupted animal Subſtances; from the moiſt putrid Vapour of low marſhy Places in Summer, where there is ſtagnating Water, which corrupts by the Heat; from the foul Air of crowded Hoſpitals, Jails, and Ships; and from ſuch like Cauſes (*b*).

When once this Fever begins, it is obſerved to be of a contagious Nature, and (if proper Care is not taken) to affect thoſe who attend the Sick, or who live in the ſame Room, and breathe the ſame Air with them.

Many Authors have reckoned the Malignant, Petechial, and Peſtilential, to be diſtinct Species of Fevers; and have treated each of them under a particular Head. But *Riverius* (*c*) has very juſtly obſerved, that they all belong to the ſame peſtilential Tribe, and only differ from one another in the Degree of In-

(*b*) See theſe Cauſes mentioned by *Riverius*, and ſince more fully explained by Dr. *Pringle*, *Obſervations on the Diſeaſes of the Army*, part iii. chap. vii.

(*c*) *River. Prax. Med.* lib. xvi. ſect. iii. Præfat.

fection, and the Violence of the Symptoms (*d*); and that they are to be cured by the ſame general Treatment, and the ſame Medicines.

(*d*) The Malignant or Hoſpital Fever, and Petechial, ſeemed to me to be entirely the ſame Diſorder, and the Petechial Spots to be only a Symptom which appeared ſometimes, but not always. And *Riverius* ſays, the Petechiæ do not always appear; but when they do, it is a moſt certain Sign of a Peſtilential Fever. See his *Prax. Med.* cap. xvi. ſect. iii.

OF

OF THE

DYSENTERY.

THE Dyſentery generally began to appear ſoon after the Army took the Field; and became frequent about the End of *July*, and continued ſo till the Army went into Winter-Quarters; and through the Winter, many of thoſe, who had this Diſorder in Autumn, relapſed, upon returning to their Duty; or by drinking too freely of ſpirituous Liquors, and being irregular in their Living.

It is now generally agreed upon, that this Diſorder is entirely produced by ſuch Cauſes as make the Juices become too putreſcent, and turn the Flow of Humours to the Bowels; and in the Camp it ſeemed to ariſe principally from an obſtructed Perſpiration cauſed by the Men's lying

lying in the Field, and doing the neceſſary Military Duties in all Sorts of Weather; at the ſame Time being often expoſed to the putrid Steams of dead Horſes, of the Privies, and of other corrupted Animal or Vegetable Subſtances (*a*), after their Juices had been highly exalted by the Heat of Summer.

At

(*a*) The Dyſentery has been long alledged to ariſe from a putreſcent Cauſe in Camps; from the Smell of corrupted dead Animals, and of Excrements, during the Heat of Summer. *Ramazzini*, in his Chapter on Camp-Diſeaſes, informs us, that Dr. G. *Erric Barnſtorff*, Phyſician to the Duke of *Brunſwick*, who ſerved five Campaigns with the *Brunſwick* and *Lunenburg* Troops in *Hungary*, told him, that the Camp-Diſeaſes, particularly the Malignant Fever and Dyſentery, took their Riſe from the Troops remaining long encamped on the ſame Ground, and being expoſed to the corrupted Steams of the Bodies of dead Men, Horſes, and other Animals, which lay unburied; and of Excrements, which were not covered with Earth. And theſe Cauſes have ſince been particularly taken notice of by Dr. *Pringle*, in his *Obſervations on the Diſeaſes of the Army*.

Many have imputed the Cauſe of this Diſorder to the eating of Fruit in exceſs, becauſe it generally appears about the Middle of Summer, the Time the Fruit begins to be in Seaſon, and continues through the Autumn. But from later Obſervations this ſhould ſeem to be a vulgar Error. Dr. *Pringle*

(part

At the Time the Petechial Fever was frequent at *Paderborn* in *January*, *February*, and *March* 1761, the Flux frequently accompanied it;

(part i. ch. iii. p. 20.) tells us, that, in the Year 1743, this Sickneſs began and raged before any Fruit was in Seaſon, except Strawberries, (which from their high Price the Men never taſted) and ended about the Time the Grapes were ripe; which growing in open Vineyards were freely eat by every body. And Dr. *Tiſſot*, in a Treatiſe which he publiſhed, called *Avis au Peuple ſur la Santé*, in his Chapter on the *Dyſentery*, § 320, ſays, that ripe Fruit, eſpecially the Summer-Fruits, are ſo far from being the Cauſe of the Diſorder, that they are the great Preſervatives againſt it: he ſays, that, in the Years which the Fruit is moſt plentiful, the Dyſentery is leaſt frequent; and he relates ſeveral Inſtances where the Uſe of ripe Grapes proved a Cure for the Diſorder. Eleven People were attacked by the Dyſentery, nine eat Fruit, and all recovered; the other two, a Grandmother and Child, from Prejudice, eat none, and both died. A Regiment of *Swiſs* Soldiers, in Garriſon in the South of *France*, had the Dyſentery very frequent among them. The Captains purchaſed ſome Acres of a Vineyard, and carried the ſick Soldiers to the Field, and gave them the Grapes to eat; and ordered the Men in Health to live upon them chiefly. After this not one Perſon died, nor was any one ſeized with the Diſtemper. — In an Account of a Treatiſe on the Dyſentery, publiſhed at *Hamburg* in 1753, which was epidemical the Year before, in *Auguſt* and *September*, we are told, that it did not proceed, as is commonly believed, from the eating of Fruit; for it was obſerved, that thoſe who eat

Fruit

it; and we had in the Hoſpitals likewiſe a Number of old Caſes of this Kind, the Remains of the preceding Campaign about *Warbourg*; beſides ſome Men who had relapſed during the Winter, and were ſent to us when the Troops marched, upon the Winter-Expedition, into the Country of *Heſſe*. In *May* and *June*, what Fluxes we had at *Oſnabruck*, were the remaining old Caſes of the Hoſpitals of *Munſter*, *Paderborn*, *Hoxter*, and *Niehms*. Some few recent ones were ſent to *Bilifield* about the End of *June*, and above 300 to *Munſter*, in *July* and *Auguſt*. Thoſe ſent to *Bremen*, in *November* and *December*, had continued for ſome time before they reached us; but a good many of the Soldiers in the Garriſon were taken ill of this Diſorder, and ſent immediately to the Hoſpital. In the

Fruit freely eſcaped better than thoſe who abſtained from it altogether. *Vide Comment. de Rebus in Hiſt. Nat. & Medecin. Geſtis*, vol. II. par. iv. ſect. v.

Generally in *Auguſt* and *September* we have People admitted into *St. George*'s Hoſpital for the Dyſentery; who have certainly not catched the Diſorder from eating of Fruit, but from working in the Fields, and being expoſed to Cauſes ſimilar to thoſe which produce the Dyſentery in Camps.

Beginning

Beginning of *May* we had but four ill of this Complaint in the Hoſpital I attended; and there were not above ſix or ſeven, among the Sick ſent down from the Army, in the Middle of this Month. In *June* there were but two ſent to the Hoſpital at *Minden*; and not above ten among the Sick ſent to *Natzungen* in the Beginning of *July*; tho' towards the Middle of this Month they began to be more frequent; and continued to be more ſo in *Auguſt* and *September*; and in the Hoſpital at *Oſnabruck* we had not above five or ſix ill of this Diſorder, in *December* 1762, and in *January*, *February* and *March* 1763.

The Dyſentery commonly begun with Sickneſs and Gripes, ſucceeded by a Purging, and attended with more or leſs Fever. Very ſoon the Gripes became more ſevere, attended with a Flatulency in the Bowels, and often with a Teneſmus. The Stools were chiefly compoſed of Mucus, mixed with Bile, and more or leſs Blood: tho' ſometimes no Blood could be obſerved in them; and then the Soldiers uſed to ſay they had the White Flux.

After

After eight, ten, or twelve, Days, if the Diſorder was not complicated with any other, there remained little or no Fever, unleſs where ſome Accident ſupervened; tho' in Caſes which terminated fatally, towards the latter End came on a Fever of a low malignant Kind, attended with black fetid Stools, Lientery, Hiccup, Stupor, and other bad Symptoms.

It often happened, that, after the Dyſentery had continued for ſome Time, the Sick complained for a Day or two of ſevere Gripes; and then diſcharged along with the Stools little Pieces of hardened Excrements; at other Times, tho' more rarely, little Pieces of white Stuff like Tallow or Suet: Frequently ſmall Filaments, and little Pieces of Membranes, were found floating in the Stools; and it was very common for the Sick to vomit up Worms of the round Kind, or diſcharge them by Stool *(b)*.

In the Courſe of the Diſorder, the Men often complained of a violent Pain of the Rectum,

(*b*) Moſt Authors, who treat of the Dyſentery, mention this Symptom of Worms; and Dr. *Huxham* tells us, that, in ſome Seaſons, he has ſeen round Worms in the Stools of moſt of the Dyſenteric Patients. *De Aere*, vol. II. p. 98.

near

near the Fundament, which was moſt excruciating when they went to Stool; it continued for ſome Days, ſometimes for a Week or more; and then they paſſed more or leſs of a Yellow Pus with their Excrements, and the violent Pain ceaſed. Mr. *A. Tough*, one of the Apothecaries to the Military Hoſpital in *Germany*, was the firſt who told me that I ſhould find Pus mixed with the Stools: on my mentioning a Caſe of this Kind, which had been relieved by Bleeding, and Clyſters often repeated; he told me he had obſerved it frequently at *Gibraltar*; and was at a Loſs to underſtand the Nature of the Symptom, till he obſerved the Matter in the Stools; which at once ſhewed him that it had been originally an acute Inflammation of the Part, and pointed out to him the proper Method of Cure.

Oftentimes the Bilious and Malignant Fevers terminated in the Dyſentery; or were accompanied with it, when it might be looked upon as a Symptom of theſe Fevers.

The Appearances we found after Death in the Bodies of ſome Patients, who died of old Fluxes

at

at *Bremen*, were: In all of them the Rectum was inflamed, and partly gangrened, especially the internal Coat. In two the lower Part of the Colon was inflamed, and there were several livid Spots on its great Arcade. In one whose Body was much emaciated, and who had been seized with a violent Pain of the Bowels two Days before his Death, all the small Guts were red and inflamed; and in another there were livid gangrened Spots on the Stomach(*c*).

There was no Disorder we were more successful in the Cure of, than recent Fluxes; but after they had continued for Weeks, and were become in a manner chronic, they often foiled all our

(*c*) From the Accounts we have in Authors, of the Dissection of the Bodies of Persons who died of the Dysentery, it would appear; that there is no Part of the alimentary Canal which has not some time or other been found inflamed, or in a state of Suppuration or Gangrene; and the Liver, Spleen, and other Viscera, have likewise been found diseased, but the Rectum and Colon have almost in all been more or less affected. The following Account I had, in the Year 1748, from the late Dr. *L. Fraser*, who afterwards practised in the Island of *Nevis*, two Days after the Patient died. *Mary Reid*, a Woman thirty Years of Age, was taken ill of a Dysentery, which in Three Weeks

our Endeavours, and a great Number died (*d*).

Weeks Time killed her. In her Life-time ſhe complained, more than ordinary, of Gripes in her Belly, eſpecially in her Left Side. Her Body was opened in Preſence of Dr. *Dundas*, who had attended her, during her Illneſs. All the Inteſtines and Meſentery were inflamed, eſpecially the Colon and Rectum; the internal Side of which was quite in a mortified State, and contained little Veſicles full of a putrid fetid Liquor, Numbers of which ſhe had evacuated by Stool ſome Days before her Death.

While this Sheet was in the Preſs, I received Dr. *Pringle*'s 4th Edition of his *Obſervations on the Diſeaſes of the Army*, and Dr. *Baker*'s Treatiſe on the *Dyſentery which was epidemic in London in the Year* 1762. Both theſe Gentlemen give an Account of the Diſſection of the Bodies of ſome People who died of the Dyſentery; where, beſides the common Appearances of the inner Surface of the Rectum and Colon being covered with a bloody Slime, and their internal Coats being inflamed, gangrened, or in a putrid State, there were obſerved on the Inſide of the lower Part of the Colon, and upper Part of the Rectum, a Number of little Tubercles, or Excreſcences, which reſembled the Small Pox, of a flat Sort at the Height of the Diſorder; but differed from them in this, that they were of a firm Conſiſtence, without any Cavity: they were believed to take their Riſe from the cellular Membrane, which lies immediately above the villous Coat. Perhaps ſuch Tubercles might have been found in the Colon and Rectum of thoſe Bodies we opened; but not looking for them, they may have paſſed unobſerved.

Morgagni, in his Book lately publiſhed, *de Sede & Cauſis Morborum*, epiſt. xxxi. is of Opinion, that the Filaments, and Pieces of Membranes, which are frequently obſerved in the Stools, are often formed of inſpiſſated Mucus and Lymph, and other Liquors; and not the Fibres, or Pieces of the villous Coat of the Inteſtines, as alledged by many Authors.

Upon my firſt being employed in the Military Hoſpitals in *Germany*, I was ſurpriſed to ſee ſo many of the old Dyſenteric Caſes end fatally; and imagined I had not fallen upon the Right Method of treating them: but upon conſulting the other Phyſical People employed in the ſame Service, I found them as unſucceſsful, as myſelf, after having tried a Variety of Remedies: And at laſt, I was convinced, that when once the Flux had continued long, and injured the Structure of the Inteſtines to a certain Length, a Gangrene

(*d*) Mr. *Cleghorn*, in his *Account of the Diſeaſes of the Iſland of Minorca*, ſays, "That almoſt all the Dyſenteries which fell under my Obſervation, unleſs they were ſpeedily cured in the Beginning, at beſt proved obſtinate, and too frequently fatal, in ſpite of the many boaſted Specificks for this Diſtemper." chap. v. p. 228. — The phyſical Gentlemen employed on the *American* Service have told me, that the old Flux Caſes were as fatal in *America*, as we found them in *Germany*. I would not from thence have it believed, that every old Flux was to be looked on as a loſt Caſe; and for that Reaſon given up, and no Attempts be made to cure it; for many, by great Care, and Strength of Conſtitution, have gradually ſurmounted the Diſorder, and recovered their Health; eſpecially when they got over the Winter, and lived till the warm Weather began.

will

will often form by ſlow Degrees; and the Diſorder end fatally, notwithſtanding the Uſe of what are eſteemed the moſt efficacious Remedies; and that, when this Diſorder is violent, the Cure principally depends upon an early and ſpeedy Application of proper Remedies, before the Strength be exhauſted, or the Structure of the Bowels too much hurt. The bad Succeſs we had in treating theſe old Caſes, may perhaps ſurpriſe thoſe who have never practiſed except in healthful Cities, where the Diſeaſe is commonly mild, and People apply ſoon for Advice. But all thoſe Gentlemen who have had the Care of Military Hoſpitals, where the Dyſentery has been frequent, and where the Sick have been often ſent a great Way, before they reached the Hoſpitals, muſt be convinced of the Truth of what is here aſſerted.

In the Treatment of this Diſorder, as well as of the Malignant Fever, nothing contributed more to the Cure, than keeping the Sick as clean as poſſible, and in large airy Wards.

Moſt of the recent Fluxes, which I ſaw, were at firſt attended with a good deal of Fever, and Pain in the Bowels; and required more or leſs Blood to be taken away, according to the Strength of the Patient, and the Violence of the Symptoms.

When the Patients were ſtrong, and complained of ſharp Pain of the Bowels, attended with a Fever, we uſed the Lancet freely; nor were we diſcouraged from bleeding in the Beginning by the low quick Pulſe which often attended the Diſorder; and we frequently found the Pulſe riſe as the Blood flowed from the Vein. But when the Sick were low and weak, without much Pain or Fever, and the Pulſe was ſoft, we were more ſparing of the vital Fluid (*e*).

As

(*e*) Although Bleeding, in the Beginning, has been recommended by *Sydenham*, *Huxham*, *Pringle*, and other Practitioners; yet it has been reckoned unneceſſary in this Diſorder by ſome late Authors. But in moſt of the recent Caſes I ſaw, it was extremely neceſſary, and contributed greatly to the Relief as well

As the Diſorder was for the moſt part attended with Sickneſs in the Beginning, we gave a Vomit after bleeding; which not only diſcharged the Contents of the Stomach, and a Quantity of Bile, but relieved the Sickneſs, and frequently threw the Patient into a breathing Sweat; and made the Purgatives which were given next Day operate more freely, and with more evident good Effects than where no Vomit had been adminiſtered.—If in the Courſe of the Diſeaſe the Sickneſs returned, the Emetic was repeated; and we often obſerved, when the Flux was obſtinate, that well-timed Vomits

well as the Cure of the Patient; indeed where the Diſorder had already continued ſome time, and the Fever was gone off before the Patient was ſent to us; and the Diſorder had become in a manner chronic, and the Patient low, then bleeding was unneceſſary, and would have probably done Hurt. Mr. *Francis Ruſſel* told me, that when the Dyſentery was epidemical at *Gibraltar*, in Summer 1756, he found that by bleeding ſuch Patients as he met with at the firſt coming on of the Symptoms, and by giving them immediately a Vomit, and afterwards a ſudorific Draught, the Diſorder was rendered mild, and few of thoſe died.

greatly promoted the Cure.—The Vomit we commonly employed was the Powder of Ipecacuana, which we gave from ten to twenty Grains; and where the Patient was ſtrong, and we wanted to make a free Evacuation, we added one, two, or three Grains of the Tartar Emetic; which encreaſed the Strength of the Vomit, and commonly operated likewiſe by Stool (*f*), as Dr. *Pringle* has obſerved.

Next Day we ordered a Purge to empty the other Parts of the alimentary Canal. The Purgative, that at firſt was moſt employed for this Purpoſe, was Rhubarb; but upon repeated Trials we did not find, that, in general, it anſwered ſo well, in this firſt Stage of the Diſorder, as the *ſal catharticum amarum*, with Manna

(*f*) Mr. *W. Ruſſel*, who was with the Hoſpital at *Martinico*, told me, that, when he was there, he found the Vomit with the Tartar Emetic to be far preferable to any other, in all Caſes where there was much putrid Bile lodged in the alimentary Canal; as it ſpeedily carried off thoſe corrupt Humours, which were often productive of the greateſt Miſchiefs, if they remained, but for a ſhort Time, pent up within the Bowels.

and

and Oil; which operated without griping or diſturbing the Patient, procured a freer Evacuation, and gave greater Relief than any other purgative Medicine we tried. Mr. *Francis Ruſſel*, Surgeon to the *Britiſh* Military Hoſpital in *America*, who was formerly Surgeon to the Iſland of *Minorca*, was the firſt Perſon who informed me (in the Year 1757) of the Uſe of the *ſal cathar-ticum amarum* in the Dyſentery; he told me, that the Year before (1756) the Dyſentery had been very frequent and very fatal at *Gibraltar*; and, after trying Variety of Medicines, he had found nothing give more Relief, or contribute more to the Cure, than repeated Doſes of theſe Salts.

As a great Part of the Cure depended on the frequent Uſe of gentle Purges (*g*) in the Beginning

(*g*) Variety of Medicines have been recommended to anſwer this Purpoſe.

The *vitrum ceratum antimonii* proved often too rough a Medicine, and therefore we laid it almoſt entirely aſide.

Repeated ſmall Doſes of the Ipecacuana, from four to ſix

ning, to carry off the corrupted Humours; the Purgative was repeated every ſecond, third, or fourth Day, as the Caſe required; the Operation

Grains, operated both as an Emetic, and kept up a Purging; but they made the Men ſo ſick, that we could not prevail upon them to continue their Uſe. Mr. *Francis Ruſſel* told me, that, in the Year 1756, he found a few Grains of Rhubarb added to each Doſe, made it operate more as a Purgative, and did not make the Men ſo ſick.——Dr. *Akenſide* propoſes giving the Ipecacuana in ſo ſmall Doſes as one or two Grains every ſix Hours, in a Draught made of Mint-water, and Half a Drachm of *confectio cardiaca*; and, after bleeding and vomiting once, ſeems to depend almoſt entirely on the Uſe of this Medicine for the Cure of the Dyſentery. See his *Comment. de Dyſenteria*, cap. 2.

The watery Tincture of Rhubarb, recommended by *Degnerus*, we tried in ſome Caſes at Bremen; and found it to be a good mild Purge, but not to anſwer ſo well as the Salts and Manna in recent Caſes. Mr. *William Ruſſel* told me that they found this watery Tincture of Rhubarb to anſwer better in *America* than any other of the Preparations of Rhubarb.

Calomel has been recommended by many as a Purge in Dyſenteries; and Dr. *Huxham* (*de Aere*, Vol. II. P. 100) aſſures us, that he has often experienced the good Effects of it, eſpecially when the Patient at the ſame time had Worms; in ſuch Caſes we joined it to Rhubarb as mentioned in the Text, or gave a Calomel Bolus over Night, and a Purge next Morning.

Dr.

tion of the former Purge, and the Symptoms, determining the Frequency of the Repetition.

It

Dr. *Duncan*, Phyſician to his Majeſty, told me, that he found the following Method of Cure always ſucceſsful in the Dyſentery, which was epidemic in *London* in the Year 1762.

If the Patient was Plethoric, or had much Fever, he ordered more or leſs Blood to be taken away; and then gave four Ounces of the following Julep, every Half Hour, till it both vomited and purged. R *Tartar. emetic. gr.* iij *Mannæ elect. Unc.* ij *ſolve in Aq. hordeat. Lib.* 1.—The next Day, and for five or ſix Days more, the Patient took ſo much of a Decoction, of Manna, Tamarinds, and ſoluble Tartar, as kept up a free Diſcharge by Stool.—If the Irritation and Griping were ſevere, he found that a Solution of Manna, in the common Almond Emulſion, was ſufficient.

When the Pain, or Teneſmus, was violent, a Clyſter, of Chicken Broth, or of an Infuſion of Linſeed, with an Ounce or two of Oil of ſweet Almonds diſſolved in the Yolk of an Egg, injected once or twice a Day, was of great Uſe.

Upon the whole, he was always pleaſed when he ſaw large excrementitious Stools come away; and when that could be procured by a gentle Method, he was the more pleaſed.

This Diſorder was very often cured in a few Days, and in that Caſe he dropt the further Uſe of Medicines; but when it exceeded the Period of ſix or ſeven Days, he then added thirty or forty Drops of the *tinctura thebaica* to the Clyſters; and ordered a Scruple of the Extract of the Logwood to be taken thrice a Day in ſome proper Vehicle.

The Patient's Diet was Rice-Gruel, Sago, Panado, and ſuch like; no Animal Food, not ſo much as Chicken-Broth, was

allowed

It was ſurpriſing with how little Loſs of Strength the Sick bore the Operation of theſe Purges; I have ſometimes given them to ſtrong People

allowed in the Beginning of the Diſtemper, nor even Oil, Butter, or Fat of any Kind. The common Drink was Almond Emulſion, Rice-Water, or Barley-Water with Gum Arabic.

Dr. *Duncan* loſt but one Patient out of Eighty, whom he had under his Care that Seaſon; and he was delirious, had a high Fever, and a *ſubſultus tendinum* before the Doctor was called to him, and he died the next Day.

The late Dr. *Young*, of *Edinburgh*, ſeems to have had a very juſt Notion of this Diſorder, and of the proper Method of treating it; for, in his Treatiſe on Opium, ſect. vii. he ſays, "I am convinced from Experience, that moſt of the Dyſente-"ries I have hitherto met with, might have been cured by "purging mildly, but conſtantly; and at the ſame time abating "the Acrimony in the great Guts by emollient Clyſters, and "in the ſmall ones by Plenty of Abſorbents, and a Diet of "Chicken Broth: But it muſt be obſerved with regard to Pur-"gatives, that Manna agrees beſt with ſome, Rhubarb with "others, Jalap, Mercury, and toaſted Rhubarb with others; "while others are ſooner cured by emollient Clyſters. I uſe "Opium only when the Diſeaſe is mild, or after its Violence is "abated by Evacuants and Emollients."

Scammony, Aloes, and the other ſtrong reſinous and hydragogue Purges, are hurtful, and occaſion Pain. I always obſerved, that thoſe Purges anſwered beſt which made the freeſt Evacuation, and acted with the greateſt Eaſe to the Patient; of which the Salts and Manna anſwered beſt of any I have hitherto uſed."

every

every Day, for two, three, or four Days ſucceſſively; and obſerved that the Patient, inſtead of being weakened, ſeemed ſtronger, and more briſk and lively, after the Operation of each, from the Relief it gave; by evacuating thoſe putrid, corrupted Humours, which kept him perpetually ſick and uneaſy, while they remained within the Bowels.

Though Rhubarb did not anſwer ſo well in the Beginning as the ſaline Purges; yet afterwards in the Courſe of the Diſtemper, when the Patient did not complain much of Gripes, half a Drachm of Rhubarb, either by itſelf or in a ſaline Draught, proved a good gentle Purge; and given with ſix or ſeven Grains of Calomel, was found to be a good Medicine, when the Diſorder was attended with Worms.

In the Evening, after the Operation of the Purge, we gave an Opiate; and repeated it at Nights, in the Intervals between the Purges; but were obliged to be very ſparing of the Doſe, while the Diſorder continued in its acute State; the Opiate was only given in a Quantity ſufficient to mitigate the Pain, and to procure Reſt,

but

but never ſo as to ſtupify the Patient, or prevent a due Diſcharge by Stool; though we were often obliged to encreaſe the Doſe, as Uſe made it familiar to the Patient.

In the Intervals between the Purges, we gave in the Day, the Mindereri Draughts with the Mithridate; or the ſaline Draughts with the Addition of four Drops of the *tinctura thebaica*; or ſome ſuch mild diaphoretic, every four or ſix Hours; which helped to keep up a free Perſpiration, without any Danger of ſtopping the Purging; and for the moſt part anſwered much better than the Diaſcord, or Philonium, or other ſtrong Aſtringents and Opiates commonly preſcribed for this Purpoſe; which were always liable to check the Purging too much, and bring on ſevere Gripes attended with Heat and Fever (*b*); and therefore we ſeldom made Uſe of them in this firſt Stage of the Diſorder.

(*b*) *Sydenham*, *Huxham*, and all good Practitioners, have taken Notice of the bad Effects of the too free Uſe of Aſtringents, and given Cautions againſt it.

If

If the Patient was attacked with ſevere Gripes (*i*), and a Teneſmus, which the Purgatives and gentle Opiates did not relieve, we ordered the Abdomen to be fomented with warm Stupes; and the Patient to drink freely of warm Barley or Rice-water, or of weak Broth (*k*), or an Infuſion of Camomile Flowers, as recommended by Dr. *Pringle*; and ordered firſt Clyſters of large Quantities of the plain emollient Decoction to be given; and if the Gripes ſtill

(*i*) If the Patient was ſuddenly attacked with ſharp Pain of the Bowels and Gripes, on a Day in which he had not Phyſic, a Doſe of the Salts and Manna was commonly given immediately, to empty thoroughly the firſt Paſſages.

(*k*) Mr. *W. Ruſſel* told me, that he and Dr. *Huck* found the free Uſe of the following Emulſion, made of Bees Wax, to be of great Uſe after Evacuations, where there was much Pain of the Bowels, in recent Caſes of Fluxes in the Hoſpitals in *America*. R. Ceræ alb. vel flavæ drachmes tres. Sapon. alb. Hiſpan. drachmam unam. Aquæ fontanæ, unciam unam, liquefiant ſuper ignem in vaſe ferreo, agitando ſpatula, & dein infunde in mortarium marmoreum, & adde paulatim aq. fontanæ, libras duas ſyrupi ſacchari. ſpiritus vini gallici tenuis, vel aquæ alicujus ſpirituoſæ ana unciam unam, terendo optime ut fiat emulſio.

This Method of diſſolving Bees Wax, in a Watery Liquor, is entirely new; for before this we knew of no Way of making it miſcible with Water.

conti-

continued, to be repeated in ſmall Quantities, with the Addition of a Drachm or two of the *tinctura thebaica*; for we obſerved that Opiate Clyſters often gave more Relief, than Anodynes adminiſtered in any other Way; and ſometimes, when a Teneſmus was very troubleſome, the common oily Clyſter, with a little Diaſcord, and *tinctura thebaica*, or the Starch Clyſter, gave more Eaſe than any other.——In ſome Caſes, where the Pain was ſharp, attended with a Fever, we were obliged to take away more or leſs Blood; and ſometimes alſo to apply a Bliſter to that Part of the Abdomen where the Patient felt moſt Pain.

During this Courſe, the Patients uſed the common low Diet of the Hoſpital; when they loathed the Rice-Gruel, they had Panado with a little Red Wine and Sugar; or Water-gruel, when it could be got, in its Place.—— Their common Drink was Barley or Rice-water; of which it was recommended to them to drink plentifully; as nothing contributed more to the Cure than the free Uſe of ſuch Liquors, to dilute

and

and blunt the Acrimony of the Fluids (*l*). In ſome Caſes, when the Purging was violent, and not accompanied with the malignant Fever, the *decoctum album* was found to be a good Drink; and we added occaſionally a few Drops of the *tinctura thebaica.*

Such were the chief Remedies we uſed in the firſt Stage of this Diſorder; but after ſome Weeks, when the Fever had abated, and free Evacuations had been made, and the Complaint become in a manner chronic, we were obliged to try other Methods; and found that the beſt Way of treating this Diſorder, was, to endeavour to brace and reſtore the Tone of the Inteſtines, by means of the corroborating and gentle aſtringent Medicines, mixed with Opiates;

(*l*) Dr. *Huxham* (*de Aere*, Vol. II. p. 107.) ſays, there is no Diſorder in which a diluting, ſweetening Drink is more neceſſary than in this; that he has done great Service among the Poor by luke-warm Water; that, after emptying the Bowels thoroughly, he has ſometimes cured this Diſorder by the Uſe of pure Water, and a ſmall Quantity of Opium. And *Baglivi* (*Prax. Med.* lib. i.) tells us, that the drinking of common Whey, and throwing up frequent Clyſters of it, had cured many, and that this was looked upon as a Specific, and kept a Secret by ſome.

while

while mild Purgatives were given at proper Intervals.

The Patients were kept to the ſame low Diet as before, with the Addition of a little Wine or Brandy. They were allowed from a Gill to a Pint of red Wine *per* Day, which was commonly mulled before it was given them; when the Wine griped them, which it frequently did, they took in its Stead Half a Gill or a Gill of Brandy, mixed with a Pint or a Quart of Barley or Rice-water, or of the *decoctum album*.

In this Stage of the Diſorder we found, that the ſame Medicines would not anſwer with all, and therefore we were obliged to try Variety (*m*); and

(*m*) Dr. *Pringle*, in the *fourth Edition of his Obſervations*, juſt publiſhed, in treating of the third or laſt Stage of the Dyſentery, remarks, that this is the Time for Aſtringents, which ought not to be given ſooner, or at leaſt very ſparingly. And he tells us, that, in the former Editions of his Work, he mentioned thoſe Compoſitions which he had moſt frequently uſed, but that he had now laid moſt of them aſide; and at preſent truſts to Vomits, and to a Milk Diet, for the perfect Cure.

He ſays, "Whenever therefore the Patient is in this State, "and eſpecially when his Pulſe is quick, and he complains of "inward

and indeed, unleſs where the Violence of the Diſorder had abated by the Uſe of Evacuations, the Event was always very doubtful; for when the Complaint had continued long and become chronic, and the Structure of the Inteſtines was much hurt, before the Sick were ſent to us; or when it continued obſtinate, and yielded but little to Evacuations, and the other Methods uſed in the firſt Stage, even Remedies eſteemed

" inward Heat, I began with giving him a Scruple of Ipecacu-
" ana; and the next Day I put him upon the Milk-Diet; which
" I continue till all the hectic Symptoms are gone, and till the
" Bowels have recovered their Tone. During this Courſe I
" have ſeldom had Occaſion for any other Medicine, excepting
" the Chalk Julep mentioned before, which I uſe for correcting
" that ſtrong Acid ſo incident to relaxed Stomachs. Some-
" times alſo I add an Opiate to procure Reſt at Night; but after
" a few Days theſe are likewiſe laid aſide. All that I require
" (which indeed is often hard to obtain) is a ſtrict Perſeverance
" in the low Diet: and now and then a Repetition of the Vomit,
" upon any new Diſorder of the Stomach, or great Laxity of
" the Bowels.

" Whilſt the Patient continues in this Courſe, I forbid all a-
" nimal Food and fermented Liquors; and beſides Milk, I al-
" low only the Preparations of Grain, Sago and Salop." See Part iii. ch. vi. p. 289, 290.

the moſt efficacious oftentimes proved unſucceſsful, and at length the Patient died.

A Spoonful of the *mixtura fracaſtorii*, taken after every looſe Stool; and an anodyne Draught at Night, had a good Effect with ſome——Repeated Doſes of the *philonium Londinenſe* anſwered better with others, who were low, and required a Remedy that was warm and cordial ——And others found more Benefit from the Mindereri Draughts, with Mithridate, or the *confectio cardiaca*, or the Theriac anodyne Boluſes.

The *mixtura Campechenſis*, both alone and with *tinctura thebaica*, checked the Purging, and gave Relief ſometimes; and the Addition of ſome of the Extract of Bark and Tincture of Cinnamon, ſeemed to encreaſe its Efficacy in one or two old Caſes, at *Bremen*; but it afterwards occaſioned ſuch Sickneſs, that we did not continue its Uſe.

In other inveterate Dyſenteries, where we thought that a ſtrong Aſtringent was wanted, we added a ſmall Proportion of Allum to the *Campechenſe* Julep, which on firſt uſing ſeemed

to

to be ſerviceable; but at other Times it occaſioned a Teneſmus and Gripes; and therefore we were obliged to be very cautious how we uſed it.

Equal Parts of the *electuarium diaſcordii* and *electuarium corticis*, taken in the Quantity of a Drachm twice or thrice a Day, was of Uſe in many old Fluxes (*n*), though it made other Patients ſo ſick, that they were obliged to lay it aſide.

We tried likewiſe in this Stage of the Diſorder, repeated ſmall Doſes of the Ipecacuana; but it occaſioned ſuch Sickneſs, that we did not perſiſt in its Uſe.

(*n*) I had lately a very remarkable Inſtance of the Effects of this Medicine, in the Caſe of one *Gilchriſt*, a middle-aged Man, by Trade a Taylor; who was admitted into *St. George*'s Hoſpital the 20th of *July*, 1763, for an old Flux, which had continued above ſix Months, and reduced him very low: He had taken a great many Medicines without any Effect. After giving him a Vomit and two Doſes of Tincture of Rhubarb, I gave him four Grains of the Powder of Ipecacuana with Opium three Times a Day; but that having no Effect, after uſing it for above a Fortnight, I ordered him the Electuary of Diaſcord and Cortex; from the Time he began to uſe this Medicine, he mended daily; and was diſmiſſed in good Health the 26th of *September*.

In other Caſes, we gave from two to five Grains of the Ipecacuana, mixed with Opium, in different Proportions (from three Grains to ten of the Ipecacuana to one of the Opium), every four or ſix Hours; it gave ſometimes a little preſent Eaſe, at other Times it occaſioned Sickneſs; we often continued its Uſe for ten, twelve, or fourteen Days; but it ſeldom produced any remarkable Change for the better, and we were obliged to have Recourſe to other Remedies.

Dover's Powder was given in large Doſes, from one Scruple to two; and proved a good Sudorific and Anodyne in ſome Caſes; though in others it made the Patients ſick, without producing any good Effect.—It commonly anſwered better, when uſed occaſionally as a Sudorific, than when conſtantly continued.

During the Uſe of theſe Remedies, it was neceſſary to repeat the Purgatives from Time to Time; or to mix them occaſionally with the other Medicines, in order to carry off any corrupted Humours, or Excrements that might be lodged in the Cavity of the Inteſtines; for when

when this was neglected, the Patients were often ſeized with Sickneſs and Gripes, and a more violent Purging than before:—And if at any Time they complained of Gripes, and paſſed little Pieces of hardened Excrements, it was moſtly a certain Sign that a Purge was indicated; and, on ſuch Occaſions, it generally gave Relief; and when attended with Sickneſs, a Vomit was given before the Purge. ——Clyſters were uſed as in recent Caſes, where the Sick were low, or had much Pain of the Bowels (*n*), or complained of a Teneſmus.

In

(*n*) On the 21ſt of *November*, 1759, *Hanah Meredith*, a middle-aged Woman, was admitted into *St. George*'s Hoſpital for a Flux, which ſhe had ſix or ſeven Weeks; ſhe had no Fever, but complained much of Sickneſs and Gripes, and her Diſorder had reduced her very low. During the two firſt Weeks of her being in the Hoſpital, ſhe had two Vomits of Ipecacuana and four Doſes of Rhubarb; and in the Intervals anodyne and aſtringent Medicines, which made no Alteration in her Complaints. On the 2d of *December*, ſhe told me, that two Years before ſhe had had a Flux for above three Months, which had yielded to no Remedies till ſhe was ordered repeated Clyſters, and that they had made a Cure in a ſhort Time. I then

In ſome old Dyſenteries, where the villous Coat of the Inteſtines was much injured, I gave the Cordial Draughts, with the Addition of Half a Drachm of the *balſamum copaivi*, a Scruple of the Extract of the Bark, and five Drops of

ordered an emollient Clyſter with a drachm of the *electuarium diaſcordii*, and a Scruple of the *tinctura thebaica*, to be given twice a Day, which gave her almoſt immediate Relief; and with the Aſſiſtance of ſome Doſes of Rhubarb, and one or two Vomits and occaſional Opiates, removed her Diſorder by the Middle of *January*; though ſhe remained long weak, and troubled at Times with Gripes; but theſe Complaints were at laſt got the better of by her taking ſome Doſes of Rhubarb, and drinking daily a Pint of Lime Water mixed with Half a Pint of Milk.

Sarah Spencer, a middle-aged Woman, was admitted into *St. George*'s Hoſpital the 9th of *November*, 1763, for a Flux, which had continued for two Months, and reduced her very low. She complained much of Sickneſs and Gripes; her Stools were moſtly compoſed of Mucus and Blood; her Pulſe was low, and ſhe had no Fever, but a Whiteneſs of the Tongue, and complained of Thirſt.—The firſt Day ſhe had a Vomit, and next Day a Doſe of the purging ſaline oily Draught.—She was ordered to have an emollient Clyſter, with a Drachm of Diaſcord, and as much *tinctura thebaica*, given her every Evening; and to have a Doſe of the ſaline oily Purge twice a Week, and Opiates occaſionally; by following this Courſe, and drinking at Times the Chalk Julep, her Diſorder was removed, and ſhe was diſcharged the Hoſpital on the 30th of the ſame Month.

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the *tinctura thebaica*, three Times a Day. At firſt, this Medicine ſeemed to promiſe much, particularly in the Caſe of an old Invalid, *William Brookes*; who had been long ill of a Flux, attended with Gripes and a Teneſmus. He had uſed Variety of Remedies, without receiving any Benefit. For the firſt Fortnight, after he began the Uſe of this Medicine, he reſted well, and found great Relief; and ſeemed to be in a fair Way of doing well. But the Diſorder being too far advanced before he began to uſe it, he relapſed, and died. On opening his Body, the inner Coats of the Rectum and the lower Part of the Colon ſeemed to be reduced almoſt to a gelatinous Subſtance, and the other Coats were black, approaching to a Gangrene.—The ſame Medicine gave Relief in other Caſes, but they were too far advanced before it was adminiſtered. In theſe Caſes, when the villous Coat of the Inteſtines was inflamed and very irritable, the mucilaginous Medicines, the *pulvis e tragacantha*, and ſuch others, were of Service; and frequently Starch Clyſters and Anodynes

gave Relief, when other Remedies had little Effect. Flower, boiled with Milk, and ſweetened with Sugar, and given for Breakfaſt, as mentioned by Dr. *Pringle*, proved a good Palliative to ſome; and the Starch and Gum Arabic, diſſolved in Water, a good Drink to others. —Lime Water and Milk, drank to the Quantity of a Pint or a Quart a Day, was of uſe to a few, though it did not agree with all.

It was very common for Patients bad in the malignant Fever to be ſeized likewiſe with the Flux. Such Caſes were always extremely dangerous; and when the Fever was bad, we were often obliged to neglect the Flux, and only attend to the Fever.—When the Purging was violent, and appeared very early in the Fever, it often ſunk the Patients, and ſoon carried them off: but where it was moderate, and did not appear till towards the Height or the Decline of the Fever, it often proved a Criſis to the Diſorder.

When ſuch Fluxes appeared early attended with ſharp Pain of the Bowels, and Signs of Inflammation, if the Patient

was

was ſtrong, we began the Cure with opening a Vein, which the Patient bore eaſily, and it gave Relief; but when the Symptoms were mild, without any acute Pain, the Bleeding was omitted.—Commonly the Bowels were loaded with corrupted Humours, when this Symptom appeared; and, therefore, we found it of Advantage to give a Doſe of the Salts with Manna and Oil, or ſome other gentle Purge, to carry them off; and in the Evening an Opiate to eaſe the Pain and procure the Patient Reſt.

After this we gave the Mindereri Draughts with Mithridate; and as ſoon as the Petechiæ appeared, or we obſerved any Remiſſions in the Fever, the Patient took every four or ſix Hours, a Drachm of an Electuary, compoſed of equal Parts of the *electuarium corticis* and the *electuarium diaſcordii* (*p*); or Half a Drachm

(*p*) This Practice of giving the Cortex with Opiates in the Dyſentery is not new; for Dr. *R. Morton*, in his Appendix to his ſecond Exerciſe on the Fevers, which appeared from 1658 to 1691, obſerves, that after the Plague of 1666 had ceaſed, a Fever from a milder Poiſon, attended with Gripes and Dyſentery, began to make its Appearance. As the common Methods

a Drachm of the Powder of the Bark, or a Scruple of the Extract, in the Mindereri Draughts, with four or five Drops of the *tinctura thebaica*; and we repeated the Opiate in the Evening, always proportioning the Quantity of it to the Effects of the former Dose, and the Violence of the Purging.

thods of Cure proved unsuccessful, and Dr. *Morton* observed Exacerbations and Remissions, he resolved to give the Bark mixed with Laudanum; and found it answer his Expectation. The first Patient to whom he gave it, was a man in *Long Lane*, who laboured under a Tertian Dysentery; upon observing a Remission, he ordered a Drachm of the Bark, mixed with a Grain of Opium, to be given every four Hours for six Times; and this removed both the Fever and Dysentery.—He says, he afterwards gave it, with equal Success, in the Quotidian Dysenteries, where he observed Exacerbations or Remissions; and he adds, that he does not doubt but that it will answer as well in Epidemical Diarrhœa's, and Camp Fevers attended with such Symptoms.

Dr. *Whytt* of *Edinburgh* has given with Success a strong Decoction of the Bark, mixed with the *confectio japonica* of the *Edinburgh* Dispensatory, in the bad State of the Dysentery, when the Mouth and alimentary Canal were threatened with Aphthæ, and even sometimes after they had appeared. And Dr. *Pringle* mentions his having given the Decoction of the Bark, wih Snake-Root and some Drops of Laudanum, in the Dysentery complicated with the malignant Fever. See *Note to Page 245 of his third Edition on the Diseases of the Army.*

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On the ſecond or third Day, we repeated the Purge; or, if the Patient was weak, ordered a Clyſter to be adminiſtered in its Place; in order to prevent the putrid Fluids and Excrements from being accumulated in the Bowels: —In other reſpects we treated it as when the Diſorder was not complicated with the malignant Fever.

This Method, though it did not ſucceed with all, yet it anſwered better than any other I tried;—and it ought to be remarked, that although it had ſuch a good Effect in Caſes attended with the malignant Fever, or where the Fever inclined to the intermittent Kind, it did not anſwer ſo well in other recent Caſes, but often made the Patient ſick.

In military Hoſpitals, Fluxes are liable to be complicated with other Diſorders, as well as with the malignant Fever; eſpecially with Coughs, and pleuritic and peripneumonic Symptoms, when the Weather begins to be cold, in *October* and *November*.—In ſuch Caſes, when the Patients were ſtrong, we were often obliged to bleed freely, to apply Bliſters, and in the Beginning

Beginning treat the Diſorder as inflammatory; having at the ſame Time an Eye towards the Flux, in the other Medicines we preſcribed.

Patients, who have had the Flux long, are apt to have their Legs ſwell at Nights; or to ſwell all over as ſoon as the Flux has ſtopped. Such oedematous or anaſarcous Swellings, we treated nearly in the ſame Manner as thoſe which followed the petechial Fever; only that we durſt not at firſt be ſo free with the Uſe of Purgatives; for as the Bowels remained weak and eaſily irritated, ſuch Medicines were apt to bring back the Flux; and therefore, in the Beginning, we were for the moſt part obliged to attempt the Cure by Diuretics and Diaphoretics; and to be ſparing of the Uſe of Purgatives, eſpecially of thoſe of the hydragogue Kind; though if the Swellings continued for ſome Time after the Flux was gone off, and the Patients were ſtrong, we then ventured to give Purges at proper Intervals:—And Bliſters and Scarifications removed them in ſeveral Inſtances both at *Paderborn* and *Oſnabruck*.

In

In *December*, 1761, we had a Caſe of this Kind where the *oxymel ſcilliticum* was of remarkable Service. A Soldier, belonging to the Guards, after a Flux, ſwelled all over, and made but a very ſmall Quantity of Water. He took Medicines of different Sorts for ſome Weeks, but received no Benefit till we gave him the Oxymel Mixture; after taking a few Doſes he made Water very freely, and in large Quantities, and the Swellings of his Body and Scrotum began immediately to ſubſide; and by continuing its Uſe for a Fortnight, the Swellings entirely diſappeared, and he recovered his Health and Strength.—The Oxymel, at the ſame Time that it promoted a Flow of Urine, kept his Body gently open, but did not occaſion any Return of the Flux.

At the Beginning of *January*, 1762, one *Carter*, a Soldier of the Eleventh Regiment of Foot, laboured under an univerſal Anaſarca; which about two Months before had ſucceeded a Flux. He made but very little Water, and that of a high red Colour. He took Variety

riety of Medicines, as Purges, Vomits, *Dover*'s Powder, lixivial and neutral Salts with Opiates, Infuſions of Horſe-Radiſh, all without Effect; till he was ordered ſmall Doſes of Calomel, three Grains Morning and Evening. After the third Doſe he began to make Water freely; and by the 24th of *January* the Swellings were all gone, and he was ſhipped off for *England* the 8th of *February*; having been diſcharged from his Regiment. The Ship, he went aboard of, was detained in the River *Weſer* for above ſix Weeks, and the malignant Fever broke out aboard the Tranſport: He took the Diſtemper, and got well of it; but towards the Decline was ſeized with a Return of the Flux, which carried him off.

When theſe oedematous Swellings came after the Purging was ſtopt, if the Patient's Strength was not much exhauſted, and he laboured under no other Diſorder, he commonly got the better of it:—But when the Strength was gone before the Swellings appeared, the Diſorder often ended in a confirmed Dropſy, and at laſt

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in Death; and when the Swellings were univerſal over the Body, while the Flux yet continued, it was a Sign of great Weakneſs, and they did not ſurvive it long (*q*).

(*q*) Many other Medicines have been uſed for the Cure of old Dyſenteries, ——— The *Coneſſi Bark*, recommended as a Specific in Diarrhœas, cured a Dyſentery which had yielded nothing to a Variety of Medicines. *Edinburgh Medical Eſſays, Vol.* III. *Art.* iv.—The *cortex eleutheriæ vel caſcarillæ* is much recommended for the Cure of Dyſenteries in the *Memoir. de L'Academie des Sciences a Paris* 1719, and is ſtill in great Repute among the *Germans*.—The Decoction of the *ſemiruba* Bark was found to have a good Effect in the Dyſentery, where the Patient continued to void Blood with his Stools; and when the Stools were only liquid, without a Mixture of Blood, ſome of the Caſcarilla added to the Decoction encreaſed its Efficacy. See *Degnerus*'s Treatiſe *de Dyſenteria*, *cap.* iii. *ſect.* 55. Theſe and many other Remedies have been tried in obſtinate Dyſenteries.

From what I have obſerved myſelf, and from the Accounts of others, I am now convinced, that ſuch Caſes as are not already too far gone, are moſt likely to be cured,

1. By keeping the Patients on a low Diet, compoſed principally of Milk, Sago, Rice, Salop, and ſuch other Things as are recommended by Dr. *Pringle*; allowing weak Broths, and a ſmall Quantity of white Meat, as they recover their Strength. The common Drink to be Barley or Rice-Water, Toaſt and Water, *Briſtol* Water, Almond Emulſion, and ſuch like.—By making them wear ſome additional Cloathing, and guarding carefully againſt catching cold.—Errors of Diet and Expoſure

to

to Cold being the moſt frequent Cauſes of Relapſes into this Diſorder.

2. By giving from Time to Time a Doſe of ſome mild Purge; ſuch as a little Manna and Salts; a Solution of Manna in Almond Emulſion; twenty or thirty Grains of Rhubarb, in a ſaline Draught, or ſuch like; and occaſionally gentle Emetics.

3. By the Uſe of ſome of the mild Aſtringents and Corroborants.—The Bark, with Aſtringents and Opiates, agreeing beſt with ſome—Decoctions of the Semiruba with others—Chalk in Electuaries, or Juleps, with others—anodyne and aſtringent Clyſters with others—while others receive more Benefit from other Remedies—and ſeverals find themſelves better when they uſe no Medicines of this Kind.

4. And by the occaſional Uſe of Opiates, and a free Air: And by moderate Exerciſe on Horſeback, or in a Machine in the convaleſcent State.

I ought not to omit mentioning, that I have ſeen ſome Caſes where Evacuations had been uſed in the Beginning, which, after they had continued for ſome Time, were cured by a regular Diet of Broths, and white Meats; riding daily on Horſeback; and drinking a generous good Claret Wine. However, it ought to be remarked, that this Method only ſucceeded where the Diſorder was mild, and its Violence had abated by previous Evacuations.

OF THE

CHOLERA MORBUS.

THE Cholera Morbus, or a ſudden and violent Vomiting and Purging, was very frequent in *July* and *Auguſt* 1761; and ſeveral were attacked with it at *Munſter*.—It was attended with great Sickneſs, with Pain, and Inflation of the Abdomen, Thirſt, and a ſmall quick Pulſe: Some had it in a pretty violent Degree, but in general it was mild; and although the Sickneſs, Vomiting, and Purging, continued, in one or two Caſes, for above a Day; yet none of thoſe died whom I ſaw.

This Diſorder weakens the Patient much, in a ſhort Space of Time; and ſometimes, when violent, kills in leſs than twenty-four Hours. It is always moſt frequent in Summer and the

Beginning of Autumn; and is taken Notice of by *Hippocrates*, *Aretæus*, *Celſus*, and other antient Authors; and is very accurately deſcribed by many of them.—It is of the bilious Kind; and the Cure principally depends upon the free Uſe of warm mild Liquors in the Beginning; to dilute and blunt the Acrimony of the Bile, and other Fluids, and to promote their Diſcharge; and afterwards of gentle Cordials to ſupport the Strength; and warm Fomentations to allay the Pain when violent; and mild Opiates to procure Reſt; and if the Sickneſs or Griping remains next Day after the Cholera is ſtopt, to give a Doſe of Phyſic and an Opiate in the Evening.

An Officer, who had been wounded on the 15th of *July*, at the Battle of *Fillinghauſen*, began afterwards to live very freely, and was on the 4th of *Auguſt* ſeized in the Night with the Cholera.—About ten o'Clock next Day I was ſent for; and found him in violent Agony, with ſharp Pain in the Bowels, Reachings, and Strainings to Vomit, and Spaſms and Cramps in the Bowels, Legs, and Arms.—He had large

red

red Blotches on his Extremities, and no Pulſe was to be felt at the Wriſt, and rather a Fluttering than a Beating at the Heart.—He had vomited and purged much in the Night before I ſaw him, but the Purging had begun to abate.—I immediately ordered him an emollient Clyſter, and a ſaline Draught, with the *confectio cardiaca*, and five Drops of liquid Laudanum; which, if he vomited up, was to be repeated ſoon after; if not, only once in four Hours: And he was directed to drink freely of weak Chicken Broth, warm.—Two Hours afterwards we found him in the ſame Situation; ſtill no Pulſe to be felt, which prevented us from bleeding him; and the violent Pain of the Stomach and Bowels, and the Cramps, continued. We then ordered Flannels, dipped in a warm emollient Decoction, to be kept conſtantly applied to his Belly, dipping them in the warm Decoction as ſoon as they began to grow cool; his Clyſter to be repeated with the Addition of a Drachm of the *electuarium e baccis lauri*, and Half a Drachm of the *tinctura thebaica*; a Scruple of Caſtor, and Half a

Drachm of Spirit of Lavender, to be added to each of his Draughts; and a Bliſter to be prepared, in caſe theſe Medicines gave no Relief. —Soon after, beginning to uſe the Fomentations, the Cramps and Pains began to abate; about four o'Clock in the Afternoon we could perceive a Fluttering of the Pulſe at the Wriſt, and all the Pains and Cramps were much eaſier; ſo that there was no occaſion for the Bliſter.—Next Morning he was very eaſy, but low, and inclined to be ſick; for which his Cordial Draughts were repeated every ſix Hours.—The third Day, as he complained of a little Griping in the Bowels, we ordered him a Doſe of Tincture of Rhubarb, and an Opiate in the Evening, which entirely removed theſe Complaints, and he was abroad and well next Day.

One Soldier, who had a good deal of Fever, and complained of acute Pain in the Bowels, along with the Vomiting and Purging, was blooded; and drank freely of warm Barley-Water while the Vomiting continued.—After throwing up a Quantity of green bilious Matter,

ter, the Vomiting ceaſed; and the Gripes and Purging became leſs violent.—In an Hour after, being able to retain ſome very weak Broth in his Stomach, he drank plentifully of it through the Day; and the Purging being abated towards Night, he took an anodyne Draught; and next Day, having ſtill a little Sickneſs remaining, had a Doſe of Phyſic and an Opiate at Night, which removed all his Complaints.

The Reſt, who were attacked with the Cholera at *Munſter*, were treated much in the ſame Way; only as they had not ſuch acute Pain and Fever as this Man, it was thought unneceſſary to bleed them.

The Antients (*r*) recommended drinking freely of warm Water in the Beginning, and the Uſe of both cold and hot Fomentations of the Stomach and Belly;—and in the low State, the Uſe of Wine, mixed with Water, and Polenta (*s*); and to apply Rue, with Vinegar, and

(*r*) See *Aretæus*, Lib. ii. Cap. 4. and *Celſus*, Lib. iv. Cap. 11.

(*s*) The Polenta ſeems to have been nothing but toaſted Barley Meal. See *Plinii Hiſt. Natural.* Lib. xxii. Cap. 25.

other ſtrong ſmelling Things, to the Noſtrils; beſides Variety of other Remedies.—When Convulſions happen, *Celſus* (*t*) adviſes to anoint the Belly with warm Oil; and if that does not remove them, to apply Cupping-Glaſſes or Muſtard to the Stomach; and, after ſleeping, to abſtain the ſecond Day from Drink; and the third, to go into the Bath; and if any thing of a Fever remains after the Cholera is ſuppreſſed, to give a Purge.

Dr. *Sydenham* (*u*) truſts principally to drinking freely of Chicken Broth, and throwing up Clyſters of the ſame, and afterwards giving Opiates.

Dr. *Ayton Douglas*, in the ſixth Volume of the *Edinburgh* Medical Eſſays (*w*), recommends a Decoction of Oat Bread, baked without Leaven or Yeſt, and carefully toaſted as brown as Coffee, but not burnt; as a Remedy very grateful to the Stomach, and uſeful in ſtopping the Vomiting, and ſometimes the Purging too: And he relates ſeveral Caſes

(*t*) *Celſus loco citato.*
(*u*) *Proceſſus integ. de Cholera.*
(*w*) Art. 65.

where

where it had a good Effect. After the Vomiting was ſtopped, he added the Uſe of mild Opiates; and, where the Patient was low, Wine and other Cordials.

OF THE

INFLAMMATORY FEVER.

ON the Return of the Troops from the Winter Expedition into the Country of *Heſſe*, in the Year 1761, we had ſeveral Men ſeized with Inflammatory Fevers without any topical Inflammation; and at the Opening of each Campaign had always Numbers ſent to the Hoſpitals ill of this Diſorder. Towards the End of the Campaigns, and throughout the Winter, many were ſeized with Inflammatory Fevers; but theſe were moſtly complicated, with pleuritic, or peripneumonic Symptoms, or other topical Inflammations, or with rheumatic Complaints.

In the Inflammatory Fever, the Sick were ſeized at firſt with cold and hot Fits, ſucceeded by

by Pain in the Head and all over the Body. The Pulſe was ſtrong and quick, and the Blood ſizy; attended with other Appearances commonly obſerved in ſuch Fevers.

As the Summer advanced, this Fever was often accompanied with bilious Symptoms, with Sickneſs, and vomiting of bilious Matter, and very frequently with a Purging: Towards the End of Summer it ceaſed, and was ſucceeded by the bilious remittent Fever.—And it was no uncommon Thing to ſee thoſe Fevers, which originally were entirely of an inflammatory Nature, after the Sick had been ſome Days in a crowded Hoſpital, partake a good deal of the Nature of the Malignant Fever, or be changed entirely into it.

We treated theſe Fevers in the common antiphlogiſtic Method.—We blooded freely in the Beginning; gave the ſaline Draughts with Nitre and other cooling Medicines; and made the Patients drink plentifully of ſmall Liquors:—And when they were inclined to be coſtive, gave mild Purges, or emollient laxative Clyſters. We afterwards applied Bliſ-

ters;

ters; and if the Pulſe began to ſink, gave Cordials, Wine, and other Remedies commonly employed in ſuch Caſes;—and towards the Decline of the Fever endeavoured to promote ſuch Evacuations as were pointed out by Nature, and likely to prove critical.

When the Caſe was complicated with bilious Symptoms in the Beginning, we were obliged to have particular Regard to the firſt Paſſages. If the Patient complained much of Sickneſs, we gave a gentle Vomit in the Evening, after bleeding; and a Purge next Day, to carry off any bilious or corrupted Humours that might be lodged in the Stomach or Inteſtines; and we found that theſe Evacuations gave Relief, and generally mitigated all the Symptoms.

If at any Time during the Fever a Looſeneſs came on, eſpecially when attended with Gripes, we gave a Doſe of ſome gentle Phyſic, which made a free Evacuation; and an Opiate in the Evening after its Operation; and afterwards we found it anſwer better to attempt rather to moderate, than wholly ſtop the Purging

ing by ſtrong Aſtringents, and Opiates; unleſs where the Evacuation by Stool was ſo great as to be in Danger of ſinking the Patient.

The *pulvis antimonialis*, compoſed of ten Parts of the *pulvis e chelis*, and one Part of the Tartar emetic, given in ſmall Doſes, was ſerviceable in many of theſe Fevers, after free Evacuations had been made.

Two Patients, one a Soldier of the Twentieth Regiment, the other a *German* Waggoner, were taken ill of this Fever about the 25th of *December*, 1762: They were both blooded freely, and had a Doſe of Phyſic in the Beginning; and the ſaline Draughts with Nitre and other cooling Remedies; and had Bliſters applied without producing any conſiderable Change in their Diſorder.—On the 5th of *January*, 1763, they both complained much of Thirſt, and were inclined to be coſtive; their Tongues were parched, their Pulſes quick and ſmall, and their Skins dry; they were reſtleſs at Nights, and the Soldier had a ſlight Delirium.—I ordered each of them four Grains of the *pulvis antimonialis* every four Hours.

6th.

6th. Next Day the Soldier told me, he had had four looſe Stools; his Senſes were much clearer, the Pulſe calmer and ſlower, and he ſaid he found himſelf lighter and eaſier, and leſs feveriſh, than he had been ſince he was firſt taken ill. The Medicine was continued, with the Addition of an anodyne Draught at Night.—7th. I found him in a fine breathing Sweat, and he told me he had ſlept well in the Night: p.—8th. The Sweat continued till this Morning, and on going off his Urine let fall a copious white Sediment, and left him free from the Fever; after which he mended daily.

The Waggoner, after taking the third Doſe of the Powders, had a warm Moiſture upon the Skin.—On the 6th was cooler and without much Fever, and had had one Stool.—7th. The warm Moiſture ended in a profuſe Sweat, which carried off the Fever, and he continued to recover daily.

OF THE ANGINA; OR, SORE THROAT.

MANY of the Soldiers during the Campaign were seized with Inflammations of the Throat, especially when the Nights were cold and moist after warm Days; and when they did Duty in cold wet Nights in the Winter Season.—All of them I saw in *Germany* were of the inflammatory Kind; I did not observe any that were malignant.

They were treated in the antiphlogistic Method.—The Patients were blooded liberally

in the Beginning—took the cooling nitrous and ſaline Medicines——gentle Diaphoretics and Purgatives——and uſed frequent Gargariſms.

Sometimes a Flannel rubbed with camphorated Oil, or the *linimentum volatile*, and applied round the Neck, was of Service.——And frequently after bleeding ſufficiently, where the Breathing or Swallowing was difficult, the Application of a large Bliſter to the Neck gave ſpeedy Relief.

OF

OF THE
PLEURISY.

THE Pleuriſy, or an acute Inflammation of the Side, was moſt frequent among the Soldiers towards the latter End of the Campaigns; though ſome were attacked with it at all Times of the Year, from doing Duty in all Sorts of Weather.

We followed the antiphlogiſtic Method of Cure; and ordered plentiful Bleeding in the Beginning, till the Violence of the Pain began to abate, or the Patient grew faint;—and the Side to be fomented with Flannels dipped in warm emollient Decoctions, and afterwards rubbed with volatile Liniments: At the ſame Time the Patient drank freely of warm diluting

ing Liquors, as Barley Water, the pectoral Decoction, and such like; and took the saline and other cooling Medicines, mixed occasionally with Sperma Ceti, or some other soft Pectorals, if there was a tickling Cough.—— When the Patient was costive, we gave a Dose of Salts, or some other mild Physic, or laxative Clysters.

If the Pain continued very acute, we repeated the Bleeding as often as Necessity seemed to require, and the Pulse could bear; and immediately after the second Bleeding ordered a large Blister to be applied to the Part affected.

Physicians formerly used to forbid Bleeding after the fourth Day, if it had been omitted so long; but when no Symptoms of Suppuration had already appeared, on whatever Day of the Disorder it happened, I ordered plentiful Bleeding, the same as in recent Cases; and never found any Disadvantage, but often great Service from this Practice.

When the Sharpness of the Pain was gone, and the Pulse became soft, very often a dull

Pain

Pain remained for ſome Time in the Part.—In ſome Caſes a briſk Purge removed it;—in others, cupping above the Part, and afterwards rubbing it with the volatile Liniments, did Service;—in others, gentle Opiates at Night, eſpecially where there was a tickling Cough;—and in one or two Caſes, this Pain did not go away, till the Patient was ordered to drink every Day for ſome Time, a Quart of the Decoction of Sarſaparilla with the antimonial Wine.

In the Courſe of this Diſorder, if a kindly Moiſture broke out on the Skin, which gave Relief, this was encouraged by the Uſe of mild warm Liquors; or if the Patient began to ſpit up a viſcid or yellowiſh Mucus, we endeavoured to keep up the Expectoration by the Uſe of mild Pectorals; and if a Purging came on, we were careful not to check it too ſoon, unleſs it was ſo violent as to be in Danger of ſinking the Patient.

When an Inflammation of the Side came to Suppuration, which happened in one or two Caſes at *Oſnabruck*, in *May* 1761; as ſoon as a Fluctuation of Matter was to be felt, an Inciſion

was made in the Part, and the Matter discharged; after which the Sore healed kindly, and the Patients recovered (*a*). I am perſuaded, was this Operation oftener performed, many would recover who die conſumptive.

(*a*) Dr. *Mead* adviſes, where the Lungs and Pleura grow together, and an Abſceſs forms, to open it with Cauſtic; and afterwards to keep the Ulcer open during the Patient's Life: For he ſays, he has often ſeen, where ſuch Sores were healed up, that the Patient died ſoon after by an Efflux of Matter upon the Breaſt. *Monita Medica*, Cap. i. Sect. 7.

OF

OF THE PERIPNEUMONY.

THE Soldiers were ſubject at all Times to the Peripneumony, or Inflammation of the Lungs, from doing Duty in cold wet Weather, and from their irregular Way of living; but more particularly towards the End of the Campaigns, and in Winter.

This Diſorder was much more dangerous and fatal than the Pleuriſy, eſpecially when neglected in the Beginning; for then Bleeding had ſeldom any Effect; the Difficulty of Breathing encreaſed, the Patient was ſeized with an Orthopnea, and ſuch an Anxiety and Senſe of Suffocation, that he could not ſleep; and the Pulſe ſunk; and in theſe Caſes Death only afforded Relief. This we experienced in many

Men who had lain neglected in Quarters, for two, three, four, or five Days, before they were brought to the Hoſpital.

In moſt of the Bodies of thoſe who died of this Diſorder, and were opened after Death; we found the Lungs violently inflamed, with livid or gangrenous Spots on their Surface; and more or leſs of a watery Serum extravaſated into the Cavity of the Cheſt.

Three had Suppurations in the Lungs. In one, who had lain ſick in Quarters for ten Days or upwards, before he was ſent to the Hoſpital, the right Cavity of the Thorax was found full of a watery Serum; and the Lobes of the Lungs on the ſame Side almoſt entirely waſted; and what remained ſeemed as it were compoſed of thickened Membranes, reſembling thoſe formed by the coagulable Lymph, or what is called by ſome (though improperly) the fibrous Part of the Blood. The Lobes in the left Side ſeemed to be in a ſound State, or at moſt but ſlightly inflamed. From the right Lobes of the Lungs being ſo much waſted, I ſuſpected that the Patient had probably laboured long under

under ſome Diſorder of the Breaſt; but I could not from Enquiry obtain any Information in this Particular; nor did he ever mention ſuch a Thing during the few Days he lived after being brought into the Hoſpital; he ſaid, he had only been ill for eight or ten Days before; but Soldiers afflicted with chronic Diſtempers, when they are ſeized with violent Symptoms, or acute Diſeaſes, are apt to reckon the Beginning of their Diſorder, only from the Time they are taken ill in a violent Manner; and never to take any Notice of their former Complaints.

Another Soldier, about the Middle of *February*, 1762, remained in Quarters five Days after being taken ill with a Pain of the Breaſt, and a Difficulty of Breathing; the ſixth Day he was brought to the Hoſpital in the Morning, and I ſaw him about eleven o'Clock; he then had all the Symptoms of the true Peripneumony, attended with a ſtrong hard Pulſe. He was immediately blooded as freely as his Pulſe would bear, had Bliſters applied, and other Remedies uſed; notwithſtanding which,

on the eighth Day from that Time, he began to throw up a purulent Matter in great Quantity, attended with a conſtant hectic Heat, and Fever; which ſunk him ſo faſt, that he died the tenth Day, after he firſt began to expectorate.

On the 2d of *March*, a Soldier, of the Fifty-firſt Regiment of Foot, was brought to the Hoſpital, with a violent Pain in the left Side, and a great Difficulty of Breathing. Upon examining him, he told me, that about two Years before he had had a violent Stitch in his left Side, towards the lower Part of the Thorax; that ever ſince he had been ſubject to a Difficulty of Breathing; and at Times to a Pain in the Side; but that he had only been ſeized with the violent Pain and Difficulty of Breathing he then complained of, about five Days before, occaſioned by catching Cold, on being billeted in a low, cold, and damp Houſe.—His Pulſe was quick, the Pain of his Side and Difficulty of Breathing ſo great, that he could not ſleep, nor lie down, but was obliged to ſit conſtantly in an erect Poſture; his Tongue was white

white and furred, and he had had no Stools for three Days: He was ordered to be blooded immediately; and to take a Doſe of Salts; and his Side to be rubbed with the *linimentum volatile*. 3d. His Breathing and Pain of the Side were eaſier; he had ſlept a little in the Night, and could lie on his right ſide, but not on his left. He was ordered the Squill Mixture. 4th. His Breathing was worſe; he was blooded a ſecond Time; had a large Bliſter applied to his Side, and was ordered to continue the Uſe of the Squill Mixture. On the 5th, 6th, and 7th, he ſeemed eaſier, though the Breathing was ſtill much affected, and his Pulſe quick and low, attended with a hectic Heat. On the 8th, he told me that his left Side was ſwelled: On examining, I obſerved a Fullneſs in that Side of the Thorax; and on preſſing with my Fingers between the Ribs, I thought I felt an obſcure Fluctuation of a deep-ſeated Fluid. From theſe Appearances, and the Hiſtory of the Caſe, I judged that there was a Collection of ſome Fluid within the Cavity of the Cheſt;

and that the only Means left to give Relief, was to make an Opening into the Cavity, and ſo evacuate the Fluid. I therefore propoſed to him the Operation of the Empyema, to be performed immediately; which he ſeveral Times obſtinately refuſed to ſubmit to: He allowed a Seton to be put in his Side, but that did not anſwer the End propoſed: He languiſhed ſix Days longer; and died the 14th of *March*. Next Day an Opening was made in the Thorax, in the Part where the Operation was propoſed to have been performed; as ſoon as the Pleura was cut through, ſome Quarts of Water ruſhed out. We then opened the Thorax, and found ſtill ſome Water in the left Cavity. The Pericardium was thickened, and ſlightly inflamed, and adhered to the Diaphragm; which was likewiſe a little thickened and inflamed in the adhering Part; the Lungs on that Side were much compreſſed, and contracted by the Preſſure of the Water; but on being inflated and cut, ſeemed in a ſound State, except that they were ſlightly inflamed. The

Lungs

Lungs of the left Side adhered every-where firmly to the Thorax, but ſeemed otherwiſe ſound; having no Tubercles, Suppuration, or other Diſorder, that we could obſerve in cutting them. The Heart and Blood Veſſels were ſound, and no other polypous Concretions were obſerved within their Cavities, but ſuch as we find in moſt dead Bodies; which ſeem to be formed of the coagulable Lymph in *articulo mortis*. The Viſcera of the Abdomen were in a ſound State.

We treated the Peripneumony nearly as the Pleuriſy. We bled freely in the Beginning, till the Breathing became eaſier, or the Pulſe began to ſink; taking Care not to be deceived by a low oppreſſive Pulſe, which generally roſe upon Bleeding. We applied large Bliſters; gave the mild Pectorals freely, and plenty of warm diluting Liquors, Barley Water, the pectoral Decoction, and ſuch like; which afforded more Relief than any other Medicines. We gave too ſaline Purges, and laxative Clyſters occaſionally; and in ſome Caſes ordered the

Steams

Steams of warm emollient Decoctions with Vinegar to be drawn into the Lungs.

By this Treatment moſt of them, who applied early for Relief, got the better of the Diſorder.

When the Expectoration began, the Patient continued the free Uſe of the mild Pectorals, and diluting Liquors; and no Medicines were given that might in the leaſt tend to ſtop it; other Evacuations were omitted, unleſs where the Pain of the Breaſt, or the Difficulty of Breathing increaſed; in which Caſe, if the Pulſe kept up, I ordered a Vein to be opened, and a ſuitable Quantity of Blood to be taken away; no other Remedy affording any Relief, till this Evacuation was made. Where the Patient was coſtive, we frequently ordered laxative Clyſters, or a mild Purge, and found them beneficial: But where no ſuch Symptoms occurred, it was beſt, for the moſt part, to omit all Evacuations of this Kind, after a free Expectoration had begun, and to truſt to it for carrying off the Diſorder.

In

In ſome Caſes, where the Expectoration ſtopt ſuddenly after bleeding, we gave with Advantage a gentle Vomit, as recommended by Dr. *Huxham* (*a*).

(*a*) Some late Authors ſeem to look upon the *Pleuriſy* and *Peripneumony* as the ſame Diſorder: However, though it be true, that when the *Pleura* is inflamed, the Surface of the contiguous Lungs is generally in the ſame State; and that, when the *Lungs* are inflamed, the Pleura is often affected; yet as I have frequently ſeen the true Peripneumony without that ſharp Pain of the Side which characterizes the Pleuriſy; and upon opening the Bodies of People who have died of the Peripneumony, have found the Lungs violently inflamed and livid, and ſo filled with Blood as to ſink in Water, without the Pleura being much diſeaſed; and upon opening the Thorax of others who died of the Pleuriſy, have found the intercoſtal Muſcles and Pleura violently inflamed with livid Spots, and only a ſmall Portion of the Surface of the contiguous Lungs affected; I cannot help ſtill looking upon them as diſtinct Diſorders; though they require nearly the ſame Treatment, and are often complicated together.

OF

OF THE

COUGH and CONSUMPTION.

COUGHS were very frequent during the Winter, and when the Weather was wet and cold. They were often accompanied with Pains of the Breaſt; and, when neglected, Obſtructions, Tubercles, and Suppurations, were apt to form in the Lungs, and the Diſeaſe to end in a Conſumption, or *Phthiſis Pulmonalis*.

When Coughs were ſlight, guarding againſt further Cold, and the Uſe of mild Pectorals and warm Drinks, removed them. But when the Patient complained of a Pain and Tightneſs about the Breaſt, it was always neceſſary to take away more or leſs Blood; and after Bleeding to give ſome of the mild Pectorals, ſuch as the

the Sperma Ceti or oily Mixtures; and, if a Fever attended, to join the Uſe of Nitre, or of the ſaline or mindereri Draughts; and, if a tickling Cough was troubleſome, to give frequently a Tea Spoonful of the oily Linctus, acidulated either with the Spirit of Vitriol, or the *oxymel ſcilliticum.* The mild Diaphoretics, ſuch as the mindereri Draughts, given along with warm Drinks, to promote a free Perſpiration, or Sweat, were uſed with Advantage; when the Patients kept in Bed, and lay in Wards which had Stoves in them.

If the Cough and Pain of the Breaſt were not relieved by theſe Means, the Patient was bled a ſecond Time, and a Bliſter applied to the Side immediately after; which often removed moſt of the Complaints. When it did not, we gave the pectoral Decoction for common Drink; and if there was a Shortneſs or Difficulty of Breathing, the ſquill Mixture, or *lac ammoniacum*, with Oxymel; and occaſionally gentle Purges: And if at any Time of the Diſorder the Tightneſs and Pain of the Breaſt returned

returned violent, we took away ſome Blood, no other Remedy affording Relief.

When there was little or no Fever, and a thin Rheum kept up a tickling Cough, nothing had a better Effect than to add ſome Drops of the *tinctura thebaica*, or ſome of the *elixir paregoricum*, to the oleagenous or ſquill Mixtures; or to give an Opiate Draught or Pill at Bed-Time, which eaſed the Cough, and procured the Patient Reſt.

At all Times it was neceſſary, when the Cough was violent, attended with Pains of the Breaſt, to keep the Patients on low Diet; and in as free and pure Air as the Nature of the Hoſpitals would admit of; for we often found that thoſe Men who had laboured long under obſtinate Coughs, which threatened Conſumptions in ſmall crowded Wards, recovered ſurpriſingly on being removed to a freer Air; of which we had a remarkable Inſtance in the Hoſpital at *Bremen*, in *January* 1762; upon removing ſome Men, afflicted with very bad Coughs, out of ſmall Wards, which were damp, into one large one, which was dry and airy.

When

When the Weather was good, we made the Patients walk out a little in the Day-Time; for we obſerved, that remaining always in the Hoſpital, and breathing nothing but a foul Air, helped to encreaſe the Diſorder.—When we knew the Men to be ſober, and not apt to commit Irregularities, we uſed to procure them good Billets, and make them come daily to the Hoſpital for their Medicines.

Equal Parts of Lime-Water and Milk, drank to the Quantity of a Quart a Day, was of Uſe to ſome; and the *infuſum amarum*, and other gentle Bitters, taken to the Quantity of an Ounce or two, Morning and Evening, to others (*a*).

(*a*) Aſſes Milk, and *Briſtol* and *Seltzer* Waters, which are found ſo ſerviceable in pulmonic Diſorders, could not be had in the military Hoſpitals; and riding on Horſeback was too expenſive a Remedy for a Soldier.

In chronic Caſes, where we ſuſpect Obſtructions and Tubercles to be formed in the Lungs, which have not already come to Suppuration, Dr. *Ruſſel* recommends the Uſe of Sea Water for reſolving them; but we were at too great a Diſtance from the Sea to try this Remedy. See his *Treatiſe on Sea Water*, Page 17.

A Decoction of the Cortex removed ſome Coughs which had continued for a conſiderable Time. In one or two of theſe Caſes, ſlight hectic Symptoms had already appeared (*b*). However, for the moſt part, where-ever Obſtructions of the Lungs were confirmed, or there were evident hectic Symptoms without

(*b*) *Mary Shepperd*, a Woman twenty-ſix Years of Age, was admitted into *St. George*'s Hoſpital the 6th of *June*, 1759, for a Cough; attended with a conſtant hectic Fever and Night Sweats, which had begun in the Month of *April*, after the Meaſles. She complained likewiſe of having the *fluor albus*, and ſhe had been blooded more than once before ſhe came to the Hoſpital.—I at firſt gave her ſome of the mild Pectorals; and a Solution of White Vitriol in Water, *utenda pro inject. uterina*. After a Week, finding no Alteration in her Complaints, I adviſed her to become an Out-patient; and to go down to her Friends in the Country, to live upon a Milk Diet; to take gentle Exerciſe, and continue the Uſe of her Medicines; which ſhe did, but without any Alteration in her Diſorder, till the 6th of *July*, when I ordered her to take thrice a Day two Ounces of the Decoction of the Cortex, along with a ſaline Draught. Immediately, on beginning to uſe this Medicine, her Diſorder began to take a favourable Turn; her Fever and Night Sweats left her, her Cough became eaſier, and ſhe recovered Health and Strength daily. She came to the Hoſpital the 15th of *Auguſt*, ſeemingly in good Health, to return Thanks for her Cure.

a free

a free Diſcharge of purulent Matter, the Bark did no Service; but rather heated and increaſed the Fever, and made the Sick more reſtleſs and uneaſy.—It was of moſt Uſe where there ſeemed to be no confirmed Obſtructions, but the Veſſels much relaxed; which we judged to be the Caſe from the Patients having no fixed Pain, nor the Breathing much affected. If the Sick were plethoric, or in the leaſt feveriſh, we ordered a little Blood to be taken away, before we began the Uſe of this Medicine.

In ſimilar Caſes, I have ſometimes obſerved good Effects from the Uſe of the Balſam *Copaivy*, or *Peru*; given either in Juleps or made up into an Electuary, as in the *electuarium e ſpermate ceti cum balſamo*; but in whatever Form they were given, if there were confirmed Obſtructions of the Lungs, they rather heated and inflamed, than did any real Service.

When Coughs continued long, attended with Pain in the Side, Difficulty of Breathing, and Hectic Fever and Night Sweats, we always

had Reaſon to ſuſpect, that the Diſorder would terminate in a confirmed Conſumption. When this was threatened, we found, that the principal Thing to be done, was to keep the Patients cool; and to endeavour to allay the hectic Heat and Fever; and to retard, as much as poſſible, the Progreſs of the Diſorder. When the Caſe was recent, we were ſometimes ſo lucky as to make a Cure; but after it was confirmed, it for the moſt part ended fatally.

We kept the Patients upon a low Diet; and where-ever Milk was to be got eaſily, we allowed them a Pint a Day (*c*); which was either mixed with Water and given for Drink, or they took it to Breakfaſt or Supper.—Their common Drink was either Barley Water or the pectoral Decoction; which was occaſionally acidulated with a few Drops of Spirit of

(*c*) In private Practice, at this Stage of the Diſorder, the Uſe of Aſſes Milk, and drinking the *Briſtol* Water at the *Briſtol* Wells, and riding on Horſeback daily, are juſtly ranked amongſt the moſt efficacious Remedies; and going into the more ſouthern Climates, as the South of *France*, *Portugal*, or *Italy*, where the Air is warmer, more conſtant, and dry, than in *England*, has often been found to produce good Effects.

Vitriol

Vitriol; and we gave at the ſame Time the cooling Medicines, ſuch as Nitre, the ſaline or mindereri Draughts, mixed at Times with Sperma Ceti, or ſome other of the mild Pectorals.

The opening a Vein, and taking away from four to eight Ounces of Blood (*d*), whenever the Pain of the Breaſt was troubleſome, or the Patient was hot and reſtleſs at Nights from the Hectic Fever, gave the greateſt Relief of any Thing we tried; and theſe repeated ſmall Bleedings were ſo far from waſting the Patient's Strength, that they rather ſeemed to prevent its being exhauſted ſo faſt as otherwiſe it would have been, by allaying the Force of the Hectic Fever.

At this Stage of the Diſorder, we put in Setons, or ordered Iſſues, to ſerve as a Drain to carry off the Matter, and found them of Advantage in ſome Caſes. When the Patients

(*d*) This Practice has been ſtrongly recommended by Dr. *Mead*, in his *Monita Medica*, Sect. x. and by an anonymous Author in the *Edinburgh Medical Eſſays*, Vol. IV. Art. 28. and Dr. *Mead* ſays, when Things have not been quite deſperate, he has ſeen good Succeſs from it.

complained of any fixed Pain, we always made the Iſſues as near the Part affected as poſſible (*e*). On the 5th of *May*, 1762, a Man, belonging to the Eighty-eighth Regiment of Foot, was ſent to the Hoſpital at *Bremen* for an Hæmoptoe, attended with a conſtant hectic Heat and Fever.—After being blooded, and uſing the cooling Remedies without Succeſs, he had four Pea Iſſues made in his Back; and had a ſlight Decoction of the Cortex, acidulated

(*e*) In *June*, 1748, a Servant Girl came to aſk my Advice for a Cough, attended with a conſtant Hectic Fever and Night Sweats, which had begun ſome Months before, on catching Cold. The Matter ſhe ſpit up was yellow, and had the Appearance of Pus; and ſhe complained of a Pain in the left Side of the Thorax. I ordered her the ſaline Mixture with Sperma Ceti to be taken thrice a Day, to loſe a little Blood, to drink an Infuſion of Linſeed ſweetened with Honey, and to have a Seton put in her Side at the Part where ſhe complained of Pain; adviſing her to go home to her Father, who was a Farmer in the Country, and to live upon a Milk and Vegetable Diet, and ride on Horſeback whenever ſhe could conveniently. She ſeemed ſo far gone in a Conſumption, that I ſcarce expected to ſee her again; but, in the Month of *December*, ſhe came to return me Thanks for her Cure, ſeeming then to be in good Health. She told me, that, as ſoon as the Seton began to diſcharge freely, ſhe found Relief; and mended afterwards daily, by following the Directions I had given her.

with

with Spirit of Vitriol. As ſoon as the Iſſues began to diſcharge freely, the hectic Heat, Fever, and Spitting of Blood, diminiſhed daily; and he recovered his Health and Strength in a ſhort Time. However, it ought to be obſerved, that although theſe Drains are ſometimes efficacious, yet, when the Diſeaſe is far advanced, the Miſchief is generally too deep rooted for them to be of any Service.

The Bark, and natural Balſams, for the moſt part were prejudicial, and encreaſed the Hectic Heat and Fever; except in one or two Caſes, where the Diſorder ſeemed to depend on a Vomica of the Lungs, and the Patient coughed up the Matter freely.—In one Caſe they were of conſiderable Service; the Patient was very low, and had the Night Sweats, but coughed up the Matter freely: On uſing the Decoction of the Bark, and the *electuarium e ſpermate ceti cum balſamo*, the Matter expectorated became thicker, and of a more balmy Conſiſtence, without any Increaſe of Heat or Fever; after which the Symptoms became gradually milder, and the Patient recovered.

In the Courſe of this Diſorder the Patients often became very hot and reſtleſs, and were troubled with Gripes, ſucceeded by a Purging: Theſe Symptoms were moſt readily removed by a Doſe of Rhubarb, or of ſome other mild Purge; for they generally proceeded from corrupted Humours lodged in the Inteſtines. In the Evening, after the Operation of the Purge, we gave an Opiate to procure the Patient Reſt.—When the firſt Doſe of Phyſic did not ſtop the Purging, we repeated the Opiates at Nights, and in a Day or two gave another Purge; and if there was much Sickneſs, or Load at the Stomach, gave likewiſe a gentle Emetic.

If the Purging ſtill continued, we were obliged to join the Uſe of Aſtringents along with the Opiates. In ſome Caſes, I found good Effects from equal Parts of Milk and Water boiled with Roſe Leaves, Pomegranate Bark, Balauſtine Flowers, and Cinnamon, as recommended by Dr. *Mead* in his *Monita Medica* (*f*); it ſerved

(*f*) Sect. x. *de Febrib. lentis ſive Hecticis.*

both

both for Food and Medicine.—When Opiates and Aſtringents were given to ſtop the Purging at its firſt Appearance, before the Bowels were emptied, they always did Miſchief; and increaſed the Heat and Fever: And although they ſtopt the Purging for a few Hours, it always broke out with greater Violence afterwards.

When the Sick were attacked with a Shortneſs and Difficulty of Breathing, which was not relieved by Evacuations, and the Uſe of cooling Medicines, and Pectorals, and Bliſters, nothing gave ſo much Eaſe, or had ſuch a good Effect, as a gentle Vomit; for it often removed the immediate Oppreſſion from the Breaſt, and helped to pump up the Matter from the Lungs.

In the advanced State of the Conſumption, the Cough was always very troubleſome; and the Sick found no Relief but from Opiate Medicines, which, in ſuch Caſes, cannot be expected to do more than give a little preſent Eaſe.—As they were apt to obſtruct the free Expectoration, we generally mixed them with

ſome *oxymel ſcilliticum*, or *tinctura fœtida*, which took off a good deal of their ſuffocating Quality.

Dr. *Barry* (*g*) adviſes for the Cure of a Conſumption, to make an Inciſion or Aperture into the Side; where-ever there is a fixed Pain attended with a Weight, a Hectic Fever, and other Symptoms of an evident Suppuration: He ſays the Pleura is thickened, and the Lungs adhere at the Part where they are exulcerated; and that by the Operation the Pus may be evacuated, and a Cure made; and he gives ſeveral Inſtances of the Succeſs of the Operation, when performed in Time.

(*g*) *Treatiſe on the Digeſtions*, p. 410.

OF THE

Epidemical CATARRHAL FEVER

Of APRIL, 1762;

CALLED,

THE INFLUENZA.

AFTER a very cold ſevere Winter at *Bremen*, the Weather, from being very cold, became of a ſudden extremely hot, about the 10th of *April*. In a few Days after, many People were ſeized with a violent Catarrhal Diſorder. It often began with ſuch a Cold and Shivering, that many imagined at firſt that they were going to have Agues; but ſoon after they were attacked with a Cough, and a Diffi-

culty

culty of Breathing, and Pain of the Breaſt, with a Head-Ach, and Pains all over the Body, eſpecially in the Limbs.—The firſt Nights they commonly had profuſe Sweats.—In ſeveral, it had the Appearance of a remitting Fever, for the two or three firſt Days.—Many had a ſlight Inflammation of the Throat, and a Hoarſeneſs. In all it was attended with an acute Fever in the Beginning, and the Urine was of a high Colour; and when the Diſorder had put on the Appearance of a Remittent Fever in the Beginning, it dropt a Sediment towards Morning after the ſecond Day; and did the ſame in all, when the Diſorder was going off.—Some had a Purging, but the greater Number were rather inclined to be coſtive.—The Cough in many was very violent; and the Patients, after each Fit of Coughing, had Reachings, or Strainings to vomit, exactly reſembling thoſe which come after violent Fits of the Hooping Cough.—At firſt the Patients ſpit up only a little Phlegm; but in the Decline of the Diſorder, they expectorated freely.—The violent Cough and Feveriſhneſs generally continued for four, five,

or

or ſix Days; with others it continued longer; and ſome had a Cough for two or three Weeks after the Fever left them.

This Catarrhal Fever ſeized moſt of the People of the Town of *Bremen*; and there were very few of the *Britiſh* who eſcaped it; at the ſame Time, it was epidemical in moſt Countries in *Europe*.

We treated it entirely as an inflammatory Diſorder, and none died who applied early for Relief.—Moſt People recovered by one plentiful Bleeding, and taking the mild cooling Medicines, ſuch as the *mixtura e ſpermate ceti cum nitro*, the ſaline or mindereri Draughts, or ſuch like. When the Fever and Difficulty of Breathing continued after the firſt Bleeding, in a Day or two a Vein was opened a ſecond Time; and immediately after a Bliſter was applied to the Back, which commonly removed the Fever, and relieved the Breathing.—When the Patients were inclined to be coſtive, a Doſe of Phyſic was of Service.

None of the *Britiſh* died, except one or two of the Soldiers, who remained in Quarters after being

being taken ill; and, inſtead of bleeding and living low, indulged in the Uſe of ſpirituous Liquors; and were not brought to the Hoſpital, till they were in the laſt Stage of a Peripneumony.—Many of the Inhabitants of the Town died of this Diſorder, which was probably owing to Want of Care.

OF

OF THE

RHEUMATISM.

THE Rheumatiſm is one of the Diſorders moſt generally to be met with in military Hoſpitals. There were at all Times ſome Men in our Hoſpitals labouring under Rheumatic Fevers, or other rheumatic Complaints; though we never had at any one Time a great Number; owing probably to the Weather being very favourable in both the Campaigns of 1761 and 1762.—It was always moſt frequent when the Weather was wet and cold; both during the Campaign, and when we were in Winter Quarters.

It

It commonly began either, 1. With an acute Fever, and Pains all over ther Body: or, 2. With Pains in particular Parts, as the Shoulders, Legs, Arms, Knees, and ſometimes of the Side, attended with ſome Degree of a Fever.—The firſt was the moſt common Form it aſſumed, when Men were attacked with it in the Field or in Garriſon; owing to their doing Duty in cold wet Weather.—The other Cauſes generally took place when they had been formerly ſubject to rheumatic Complaints, and had caught Cold; or after they had been weakened and reduced low by Fevers, Fluxes, or other Diſorders.

We had but very few Rheumatiſms accompanied with Swelling, Pain, and Inflammation of the Joints of the Knees and Wriſts, *&c.* which are ſo common in our Hoſpitals about *London*. I did not meet with above a Dozen Caſes, of this Kind, whilſt in *Germany* with the Army.

When the Rheumatiſm began with Pains all over the Body, attended with a High Fever, we treated it at firſt entirely as an Inflammatory Fever.

Fever (*a*). We blooded freely, and repeated this Evacuation often (*b*), if the Blood continued ſizy, and the Pains violent; provided the Pulſe was ſtrong. When the Pleura, the Lungs, or any other of the Viſcera were affected, we blooded as freely as we ſhould have done in acute Inflammations of theſe Parts:

(*a*) *Sydenham*, in treating of this Diſeaſe, orders Bleeding, and that to be repeated next Day; and afterwards every other Day, two, three, or four Times, or more, as the Patients Strength can bear it; and on the intermediate Days to give a purgative Clyſter. But in young People, and thoſe who have lived regularly, he ſays, that a very low Diet will cure as effectually as Bleeding and Medicines: That the Patients muſt live four Days on Whey alone, but after this may eat Bread for Dinner; and on the laſt Days for Supper alſo; and when the Symptoms begin to abate, he allows them to eat boiled Chicken, or other light Food; but ſays they muſt live every third Day on Whey, till their Strength returns. *Proceſſ. Integr. de Rheumatiſmo.*

(*b*) A Remark of Dr. *Huxham*'s deſerves to be taken Notice of here: He tells us, that there are ſome Kinds of Rheumatiſms, *viz.* thoſe which come from a ſharp ſerous Rheum, which do not bear the free Uſe of the Lancet; that plentiful Bleeding does more Hurt than Good; and that, in ſuch Caſes, the Medicines which bring out breathing Sweats, and at the ſame Time correct the Acrimony of the Blood, joined with gentle Opiates, have a much better Effect. *De Aere*, Vol. II. p. 185.

We

We gave the ſaline Draughts with Nitre (*c*); and Plenty of Barley Water and other weak diluting Liquors; and gentle Phyſic once or twice a Week; and afterwards applied Bliſters, which often relieved both the Pains and Fever.

After ſome Days, if the Pains ſtill remained, we continued the ſaline Draughts with Nitre throughout the Day; and in the Evening en-

(*c*) Dr. *Brockleſby*, in his *Obſervations on military Diſeaſes*, recommends the Uſe of large Quantities of Nitre diſſolved in Water Gruel, or Sage Tea, (in the Proportion of two Drachms of the Nitre to a Quart of the Liquor) in acute Rheumatiſms. He ſays, "I am aſſured from numberleſs Inſtances, that in "ſtout young Men, by taking ſix hundred Grains (ten Drachms) "daily, for four or five Days ſucceſſively, and diluting plen-"tifully, as before recommended, plain Nitre proves the moſt "powerful and beſt Sudorific, in ſuch Complaints, that I have "ever tried; and this Quantity, and even more, may be re-"tained in the Stomach, and paſs through the Courſe of the "Circulation, by only diluting properly with thoſe thin atte-"nuating Beverages as before recommended. Such Quanti-"ties, in three or four Days, ſeldom failed wonderfully to re-"lieve the Patient, and very often to cure him entirely, by the "moſt plentiful and profuſe Sweats." *See from p.* 116, *to p.* 124.

I have never hitherto given Nitre in ſuch large Quantities as here recommended by Dr. *Brockleſby*.

deavoured

deavoured to promote a free Perſpiration by Means of the mild Diaphoretics, ſuch as the mindereri Draughts with Mithridate, in Doſes frequently repeated; at the ſame Time, the Patient kept in Bed, and drank freely of mild diluting Liquors. Sometimes we gave twenty, thirty, or forty Drops of Spirits of Hartſhorn, in repeated Draughts of warm Barley Water: or a like Quantity of the Antimonial Wine, uſed in the ſame Manner: or from ſixty to a hundred Drops of the Antimonial Wine, mixed with one-fourth Part of the *tinctura thebaica*, in a large Draught of ſome warm Liquor; which I have obſerved, in many Caſes, to have a better Effect, than moſt other Medicines uſed for this Purpoſe; as it acts both as an Opiate in eaſing the Pain, and procuring Reſt; at the ſame Time that it promotes a free Perſpiration, or gentle Sweat, to carry off the Diſtemper.

But it ſhould be obſerved, that, in the Beginning of Rheumatic Fevers, forced Sweats generally did Hurt, and often increaſed both the Pain and Fever; and that in general we

had greater Succeſs, and made ſpeedier Cures, when we did not attempt to promote Sweating, till after other Evacuations had been ſufficiently made, and the Fever had begun to abate; and that in this Fever, when we did attempt to procure Sweats, the milder Diaphoretics, with Plenty of weak diluting Liquors, anſwered better than thoſe of a more heating Nature; though after the Fever was gone, and the Pains ſtill continued, ſometimes the ſtronger Sudorifics, ſuch as G. Guaiac, and its volatile Tincture, *Dover*'s Powder, and the like, beſt anſwered the Purpoſe, and carried off the Diſtemper, when the milder ones had little Effect.

I have often obſerved, where Sweating made no Change in the Diſtemper, that keeping up a free Perſpiration by Means of the Decoction of the Sarſaparilla with the Antimonial Wine, or ſmall Doſes of the *pulvis antimonialis* (*gr.* v.), given twice or thrice a Day, removed Rheumatiſms, which had reſiſted the Force of other Remedies.

Some-

Sometimes the cold Bath (*c*) removed Pains which had not yielded to internal Medicines; but it ought to be obſerved, that when Patients went into the cold Bath while the Feveriſhneſs ſtill remained, and the Blood continued ſizy, or before free Evacuations had been made, oftentimes, inſtead of giving Relief, it made the Diſorder worſe, and more obſtinate (*d*).

When the Rheumatiſm was confined to a particular Part, attended with Fever, we treated it as the acute Rheumatiſm. Fomenting the Part with warm emollient Decoctions, and

(*c*) I have frequently ordered the warm Bath with Advantage n Rheumatic Caſes in *St. George*'s Hoſpital; but we had no Convenience of this Kind with the flying Hoſpital in *Germany*.

(*d*) This I have ſeen many Inſtances of, particularly in the Caſe of *Ann Walker*, a Woman of twenty-three Years of Age, who was under my Care in *St. George*'s Hoſpital, in *May*, 1759. Before ſhe came to the Hoſpital, ſhe had been blooded, and had gone into the cold Bath four Times, which, ſhe told me, had increaſed her Pains to a violent Degree; in which State ſhe had continued for ſome Weeks before ſhe came to the Hoſpital; but by being blooded, and taking the cooling ſaline Medicines, with gentle Purges, and mild Diaphoretics, ſhe got well in a Month's Time.

rubbing it afterwards with the volatile, or ſa-ponaceous Liniments, often gave Eaſe; and the Application of Cupping-Glaſſes and Bliſters frequently removed the Diſorder. In ſome Caſes, where the firſt Bliſter did not relieve, the Application of a ſecond, and afterwards keeping up a Diſcharge from the Part by Means of the Epiſpaſtic Ointment, carried off the Pain. In others, where the mild Diaphoretics were ineffectual, Sweating, with the Gum Guaiac, or *Dover*'s Powder, and ſuch other Medicines, after the Fever was gone, removed the Complaints (*e*).

(*e*) Warm Water, pumped upon the Part, often removes ſuch rheumatic Pains as have reſiſted the Force of internal and other Remedies. On the 29th of *Auguſt*, 1759, *Mary Ward* was admitted into *St. George*'s Hoſpital for rheumatic Pains of the Arms, Legs, and Knees, attended with Fever, which all yielded to Evacuations, and the Uſe of cooling Medicines, mild Diaphoretics, and of the warm Bath, except the Pain of the Knee; which, after it had reſiſted the Courſe above-mentioned, was at laſt removed by pumping warm Water on the Part, three Times a Week; joined to the Uſe of Fomentation and volatile Liniments.

Whe

When the Rheumatiſm was attended with Inflammation and Swelling of the Joints, we blooded freely, gave cooling Purges, and the ſaline Draughts with Nitre, along with Plenty of weak diluting Liquors, and preſcribed a cool low Diet.

After the Violence of the Fever and Inflammation was abated, fomenting the Parts, and rubbing them with the ſaponaceous or volatile Liniments, ſometimes haſtened the Diſcuſſion of the Swelling; as did likewiſe the Application of Bliſters (*f*), after the Inflammation was entirely

(*f*) *Ann Ragen*, a Woman about thirty-three Years of Age, was admitted into *St. George*'s Hoſpital the 17th of *January*, 1759, for rheumatic Pains of her Legs and Arms, and a Swelling of her right Knee. Free Evacuations, and the Uſe of cooling Medicines, and mild Diaphoretics, removed all her other Complaints, except the Swelling of the Knee, by the Middle of *February*, when I ordered a Bliſter to be applied to it; after which the Swelling gradually decreaſed, and ſhe was diſcharged, cured, the 20th of *March*.—*Rachael Hyde*, a Woman twenty-four Years of Age, was admitted into *St. George*'s Hoſpital the 9th of *May*, 1759, for ſimilar Complaints, which were removed by the ſame Means, all except the Swelling of the Knee. A Bliſter was applied, and moſt of the Swelling went away, but returned ſoon after: It was at laſt removed by the

entirely gone; but it ought to be noticed, that if volatile Liniments or Blisters are used too soon, they will sometimes occasion violent Inflammation and Pain (*g*).

Rheumatic Cases of this Kind are often very obstinate, and require a considerable Length of Time before they are got the better of; and frequently more or less of the Swelling, especially of the Wrists and Joints of the Fingers, remains ever after; and Patients, who have once had the Rheumatism in this violent Degree, are always subject to Relapses; as are even those who have had the Rheumatism but slightly.

Mercury (*h*) has been recommended in the

Use of the warm Pump three Times a Week, and drinking a Pint of the Guaiac Decoction daily.

(*g*) I have sometimes ordered Leetches to be applied to such Swellings (as recommended by Dr. *Pringle*), and found them to be of Service; and, at other Times, I have applied emollient Fomentations and Poultices, which have given great Ease to the Patient.—I have seen Setons or Issues, made near the Part affected, afford considerable Relief.

(*h*) Dr. *Musgrave*, in his Treatise *de Arthritide Symptomat.* p. 30, cap. ii. sect. 10, says, he has known a Salivation, raised by Mercury, cure the Rheumatism.

Cure

Cure of Rheumatiſms; but I never found it do any Service by itſelf, except in Caſes complicated with venereal Symptoms; though I have often given it, and even ſometimes gone ſo far as to raiſe a Salivation, where the Pains were moſt ſevere in the Night; and the Patient, at the ſame Time, thought he had ſome Reaſon to ſuſpect a venereal Taint, though no external Symptom appeared. However, many good Practitioners have recommended ſmall Doſes of Calomel to be given at Nights, and next Morning a Purge; in which Way, I think, I have obſerved good Effects from its Uſe.

The Bark was frequently of Uſe in reſtoring the Strength, and removing thoſe rheumatic Pains which remained after Fevers, and other Diſorders; but, in other Caſes, it had little Effect.

When the Rheumatiſm continues long, and has taken deep Root, *Sydenham* (*i*) adviſes to bleed from Time to Time, at ſome Weeks Diſtance; which, he ſays, will either entirely

(*i*) Vide *Sydenham. Opera.* ſect. vi. cap. 5.

remove the Diſeaſe, or bring it to that Condition, that the Remains of it will be eaſily extirpated by an Iſſue; and giving ſome of the volatile Salts in *Canary* Wine, Morning and Evening. I have always obſerved in rheumatic Caſes, which continued long, that, after free Evacuations, the Patients received more Benefit from a mild low Diet, continued for ſome Time, and the Uſe of diluting Decoctions with mild Diaphoretics, while they took gentle Purges once or twice a Week, than from any other Remedies.

I have given Half an Ounce of Soap a Day, for a conſiderable Time, in ſome old rheumatic Caſes, in the Manner recommended by the late Dr. *John Clerk* of *Edinburgh*, as mentioned by Dr. *Pringle*; and, I think, with Advantage; but have not had ſufficient Trials to aſcertain the Merits of this Medicine.

Dr. *Sydenham*, in treating of the Rheumatiſm, which he calls ſcorbutic, ſays; that after it had reſiſted Bleeding, Purging, low Diet, and other Remedies, he has cured it by giving thrice a Day two Drachms of an Electuary made

made of *conſerv. cochlear. horten. recent. unc.* ij. *lujul. unc.* i. *pulv. ar. comp. drachm* vi. *cum ſyrup. aurant.* q. s. drinking after it three Ounces of a Water drawn from *Brunſwick* Beer, and ſome of the antiſcorbutic Plants.

There is no Diſorder which Soldiers are ſo apt to counterfeit as the Rheumatiſm, when ever the Duty in the Field is ſevere; but while there is no Fever or Size in the Blood, or other evident Marks of the Diſtemper, and the Men look healthy, there is always Reaſon to ſuſpect Impoſture.

OF

OF THE

Autumnal Remitting Fever.

THE Remitting Autumnal Fever, called by the Antients συνεχης, was alſo one of the moſt frequent Diſorders during the Campaign.

This Fever is obſerved in moſt Countries, after the Juices have been highly exalted by the Heat of Summer; and People are expoſed to the Heats of Mid-Day, and to the cold Damps of the Night. We obſerve it every Year in the Neighbourhood of *London*, eſpecially among the labouring People, who work in the Fields, towards the End of Summer, and in Autumn; but it is generally in a milder Degree than in Armies, where Men are more expoſed to the Viciſſitudes of the Weather.

As

As we go further towards the South, this, as well as other bilious Diſorders, becomes more frequent.

This Fever is reckoned the endemic Diſtemper of the *Weſt Indies*, of the Coaſt of *Guinea*, and other Places in the Torrid Zone; but in thoſe warm Countries it appears in a more violent Degree; makes a much more rapid Progreſs; and proves far more fatal than in our cooler and more temperate Climate. And it is obſerved to be always moſt frequent and moſt fatal where a Country is covered with Wood, or is marſhy; and where there are frequent Fogs, and much ſtagnating Water, which corrupts by the Heat of Summer.

In *January*, *February*, and *March* 1761, we had none of thoſe Remitting Fevers at *Paderborn*. In *April*, ſome few of the Soldiers, on their Return from the Winter-Expedition into *Heſſe-Caſſel*, had Fevers attended with bilious Symptoms; but they were rather of the continued, inflammatory Kind, and tending to malignant, than ſuch as could be called remitting.

The

The firſt Time that I ſaw much of this Fever, was among the Sick ſent to *Biliſield* in the End of *June* 1761; ſoon after the Army took the Field. The Remiſſions were ſhort, and it partook much of the Nature of the common Inflammatory Fever; and moſt of them were cured by the antiphlogiſtic Method. A Day or two before we left this Place, it began to change into the Malignant Hoſpital Fever, from the Sick being too much crowded.

In the Middle of *July*, about Twelve Hundred Sick were ſent to the Hoſpital at *Munſter*; and about one-third Part were ill of this Remitting Fever. It did not partake near ſo much of the inflammatory Nature as at *Biliſield*; the Remiſſions became much more evident; and it was attended much oftener in the Beginning with bilious Vomiting and Purging; and in ſome few the Diſorder turned to a Dyſentery. About eight or nine had it changed into the Hoſpital Fever, from the Wards in one of the Hoſpitals being too much crowded; and in ſome few the Diſorder terminated in regular Agues. In *November* ſeverals were taken

ken ill of it in the Garriſon of *Bremen*, which moſtly ended in a regular Intermittent, the endemic Diſtemper of the Place. Towards the End of *December* we had none of theſe Remitting Fevers, the Diſorders turning more to the inflammatory Kind.

In *June* 1762, this Fever began to appear again among the Sick, ſent from the Army, to the Hoſpital at *Natzungen*; and it continued to be frequent through the Summer and Autumn; and the greateſt Part of theſe Fevers this Year terminated in regular Agues, moſtly in Tertians, and were cured by the Bark; whereas the Year before very few terminated this Way.

This Diſorder in the Beginning had commonly the Appearance of a continued Fever; and many had a Sickneſs and Vomiting, and threw up a Quantity of yellow Bile, mixed with the Contents of the Stomach. In a few Days, eſpecially after Bleeding, the Remiſſions became clear; tho' on its firſt Appearance in *June* 1761 they were ſhort, and rather obſcure; and it ſeemed ſtill to partake a good deal of the

Nature

Nature of the common Inflammatory Fever, the Blood being very ſizy; but as the Seaſon advanced, the Remiſſions became more evident, and the Paroxyſms more like thoſe of an Ague; and the Blood leſs ſizy, tho' at all Seaſons of the Year it had ſome Appearance of an inflammatory Buff in this Diſorder. The Sick were reſtleſs and uneaſy at Night; but commonly felt themſelves cooler and lighter in the Day-Time: and although they had no cold Fit, as the Fever came on at Nights, and many of them no Breathing Sweat, as they became cooler and freer from the Fever in the Morning; yet the Fits were ſo remarkable, that many of the Patients uſed to ſay they had a regular Fit of an Ague every Night, or towards the Morning; and ſome few, that they had the Fit every ſecond Night. As the Seaſon advanced, the Remiſſions appeared more diſtinct. However, there was always a good Number in whom the Fever went on in a continued Form, through its whole Courſe, without any Signs of Remiſſion; tho' they had all the other Symptoms of this Fever. In a few

Inſtances

Inſtances the Fever, after it came to remit, changed again into a continued Form.

The Heat in the Time of the Paroxyſms roſe high, and ſeveral were delirious during its Continuance (*a*); but were quite ſenſible in the Intervals, though never wholly without the Fever.

At the End of *July* 1761, four or five were attacked with a Bleeding at the Noſe, in the Time of the Paroxyſms, and became cooler afterwards; but it did not prove a Criſis in any of them.

The Urine in the Beginning was commonly of a high Colour, though ſometimes it was pale and limpid: At firſt it depoſited no Sediment; but when the Fever came to remit, there was often a ſmall Sediment after each Paroxyſm; and as the Fever was going off, it let fall a Sediment in all (*b*).

Some

(*a*) I did not ſee the Delirium riſe ſo high, nor the Paroxyſms ſo ſevere, as in the Marſh Fever deſcribed by Dr. *Pringle*.

(*b*) Dr. *Hillary* ſays the Symptoms of this Fever in *Barbadoes* were much the ſame as thoſe of the συνεχης, or continued Remitting

Some at firſt were inclined to be coſtive; others had a Sickneſs and Purging; and ſeveral of thoſe who were coſtive in the Beginning, were in the Courſe of the Diſorder attacked with a Purging; and others, after ſome previous Complaint of the Stomach, were ſeized with both Vomiting and Purging. In general, after the Sick continued ſome Days in the Hoſpital, they were inclined to be looſe; which was a favourable Circumſtance, when this Evacuation was not ſo great as to be in Danger of ſinking the Patient. Some were attacked with a Dyſentery.

In this, as well as in moſt other Fevers, the Sick frequently paſſed by Stool Worms of the round Kind; and ſometimes they vomited them up, or the Worms came up into their Mouth or Noſtrils while they lay aſleep in Bed; and ſome towards the Height were afflicted

ting Fever in England; except only that the Urine in this hot Climate never depoſits any lateritious Sediment, nor very rarely in any intermitting or any other Fever, except when a Criſis happens that Way. *Obſervations on the Diſeaſes of Barbadoes*, p. 23.

with

with Deafneſs, which was commonly a favourable Symptom.

Moſt of thoſe ill of this Diſorder had a yellowiſh Colour of the Countenance, which went off with the Fever. It was more obſervable in ſome than in others; in general, it was ſlight; ſome few became yellow all over (*c*); particularly one Man, in the Hoſpital at *Munſter*, who, after being ſeized with violent Vomiting and Purging, Convulſions, and Twitchings of the Tendons, and Hiccup, became yellow, as in the deepeſt Jaundice. This Symptom of Yellowneſs ariſes from a Redundancy and Abſorption of Bile; and is ſometimes obſerved in other Fevers as well as this (*d*); for while

(*c*) Dr. *Pringle* takes Notice of this yellow Colour or Jaundice. He ſays, "ſome grow yellow, as in the Jaundice. This was "found more frequent during the firſt Campaign than afterwards; it was an unfavourable, but not a mortal Symptom." *Obſerv.* part iii. ch. 4.—*Hippocrates* mentions the Jaundice occurring in Fevers, *Aphor.* iv. § 62 & 64; and he reckons it a favourable Symptom in ardent Fevers, where it happens on the ſeventh Day. See *Book on Criſes*'s, ſect. 3.

(*d*) Does this Fever, when accompanied with this univerſal Yellowneſs of the Skin, approach to the Nature of the yellow

while we were at *Paderborn* in *February* 1761, two Men were brought to the Hoſpital in Fevers, attended with this Symptom. They were both delirious, with parched dry Tongues, ſlight

Fever of the *Weſt Indies?* As I had ſo few Caſes of this Kind under my Care, I cannot determine any thing about it from my own Experience; but, from the Accounts of others, I ſhould believe them to be very different Diſorders.—In the yellow Fever of the *Weſt Indies*, the Blood appears quite looſe and diſſolved, without the leaſt Appearance of Size, even on the firſt Day; and the general Yellowneſs appears on the third or fourth, with Signs of a total Diſſolution, and gangrenous Diatheſis of the Blood: Whereas, in the Remitting Fever of *Jamaica*, Mr. *Naſmith* tells us, (See Dr. *Lind*'s firſt Paper on Fevers), there is always an inflammatory Diatheſis of the Blood. The Yellowneſs in both depends on a Redundancy and Abſorption of Bile; but in the yellow Fever of the *Weſt Indies*, the Bile is in a much more putreſcent State, and a great Part of the Cure depends on the early and ſpeedy Evacuation of it.—In the yellow Fevers which appeared in *Haſlar* Hoſpital, which are taken Notice of by Dr. *Lind*, in his *Two Papers on Fevers*, the Blood was in quite a different State from what it is in the Yellow Fever of the *Weſt Indies*; the Blood drawn from two of theſe Patients became covered with a thick yellow Gluten, and the Serum was of the Conſiſtence of a thin Syrup, and of a deep yellow Tinge, and taſted bitter; and in another who was bled two Days before his Death, it threw up the ſame thick yellow Gluten, tho' the red Part below was quite looſe.

Twitchings

Twitchings of the Tendons, and other bad Symptoms; and one of them had a continual Vomiting and Purging. They both died, and the Body of him who had the Purging was opened. All the Bowels, especially the Colon, were tinged with a yellow Bile, and had a slight Degree of Inflammation all over their Surface; the Gall-Bladder was distended with a very dark-coloured Bile; but no Concretions were found in its Cavity, or in the bilious Ducts; nor Mucus, or any other Thing obstructing these Passages. The Surface of the Lungs seemed slightly inflamed; and there was a small Quantity of greenish Serum in the Cavities of the Thorax. I could not learn the Histories of these two Mens Disorders, before they were brought to the Hospital; but, from the Symptoms, was inclined to believe, that the Fevers had been of the malignant or petechial Kind; and that the yellow Colour was only an accidental Symptom of it; for on one of the Men we could perceive obscure Traces of dun petechial Spots on his Breast and Arms; and the malignant Fever was frequent at this

Time among the Troops, and the bilious autumnal Fevers had ceaſed long before.

I could not obſerve any certain critical Days, or Periods, when this Diſorder terminated.—Some, who had it ſlightly, got well in a few Days; with others, it continued longer: Some continued long feveriſh, and would ſeem cooler and freer from Fever for a Day or two, and then grow worſe again; and many had repeated Relapſes.

Neither could I obſerve any regular Criſis in this Fever. Sweat was the Diſcharge which oftenеſt proved critical. Many ſeemed to be relieved by a Purging; but as the greater Part had a Looſeneſs after ſome Days, which continued often through the Diſorder, without producing any very ſudden Change in the Symptoms, it ſeemed to be a favourable Circumſtance; though it ſeldom carried off the Fever ſo ſuddenly as to be manifeſtly critical. The Urine broke, and dropt a Sediment, for the moſt part, as the Fever took a favourable Turn.

When

When this Fever proved mortal, it commonly assumed a continued Form; the Tongue became parched and dry, the Patient delirious, with Twitchings of the Tendons, Hiccup, and other fatal Presages; while others were seized with a violent Diarrhœa, or Dysentery, which sunk them irrecoverably.

In the Beginning, it was absolutely necessary to bleed the Patients freely; and frequently to repeat the Evacuation, where the Symptoms required it. The Blood was of a florid Colour, and commonly threw up more or less of an inflammatory Buff.

In these Fevers, we were obliged to have particular Regard to the first Passages, especially in the Beginning of the Disorder; for they were generally loaded with bilious Humours (*e*); which, if suffered to remain in the Bowels,

(*e*) According to Dr. *Hillary*'s Account of the Yellow Fever in the *West Indies*, which is attended with bilious Vomiting, it bears bleeding once or twice, but not a third Time, before the third Day, but not at all after that Time; and after Bleeding a great Part of the Cure depends on carrying off as much of the putrid Bile as expeditiously and safely as possible,

Bowels, were either abſorbed, and increaſed the Heat and Fever, or brought on a violent Diarrhœa; and therefore, after Bleeding, we gave a Vomit

which he ſays is to be done by making the Patients drink freely of warm Water (ſometimes mixed with a little ſimple Oxymel or Green Tea) ſo as to vomit ſeven or eight Times; and then to give a grain, or a Grain and a half of Opium, to procure Reſt, and to ſettle the Stomach; to make the Patient take nothing for two Hours after; and then, if he has not had a Stool, to give a laxative Clyſter; after ſix Hours Reſt, to give a gentle Purge, to carry off as much as poſſible of the bilious corrupted Humours; and in the Courſe of the Diſorder to repeat the Purge, as often as the Patient is attacked with an Anxiety, and a painful burning Heat about the Præcordia; which almoſt depend on bilious corrupted Humours pent up within the Bowels; and to endeavour to ſupport the Patient's Strength, and ſtop the putreſcent Diatheſis of the Fluids by ſuitable Antiſeptics, of which he found a watery Infuſion of Snake-Root, mixed with *Madeira* Wine and Syrup of Poppies, to anſwer the beſt of any Thing he tried, and to ſit eaſieſt on the Stomach; and to this he added the Uſe of Cordials, and of ſtrong Wine Whey as the Patient became lower.

Dr. *Hillary*'s Purge was: *R.* Mannæ ſeſcunc vel unc. ij. Tamarind. cond. unc. i. Tartar vitriolat. gr. x. ſolve in ſeri lactis præparat. cum Vin. Maderienſ. unc. vi. Colaturæ adde Tinct. Senæ unciam dimidiam. Divide in Partes quatuor, & capt. æger unam omni hora donec laxetur alvus.

His

a Vomit in the Evening, and next Day a Doſe of ſome gentle Purge, as Rhubarb or Salts; to carry off theſe putrid, bilious Humours: And afterwards, in the Courſe of the Diſorder, if the Patient was coſtive, and grew hot, reſtleſs, and uneaſy, we either repeated the Purge, or gave laxative Clyſters, which generally re-

His Infuſion of Snake-Root was prepared in the following Manner:

R. Rad. Serpent. Virgin. drachm. ij. Croci Angl. drachmam dimidiam, infunde per horam vaſe clauſo in aq. bull. q. s. & dein unc. vi. Colaturæ, adde aq. Menth. ſimp. unc. ij. Vin. Maderienſis, unc. iv. Syrup. Croci vel Syr. e Mecon. unc. i. Elix. Vitriol. acid. q. s. ad gratum ſaporem M. capiat æger cochlear. ij. vel iij. omni hora vel ſecunda quaq; hora vel ſæpius pro re nata.

The Stomach is ſo irritable in the Beginning of this Diſorder, as to reject the ſaline Draughts, Nitre, and ſuch other Medicines. Nor will the Bark, which might be judged a very proper Medicine in the ſecond Stage of the Diſorder, lie upon the Stomach, but is thrown up immediately, in whatever Form it is given. However, a Gentleman who had practiſed long in the *Weſt Indies* told me, that although the Patient could not retain it in his Stomach, yet that he had found great Service, after the Bowels were emptied, from the Bark uſed freely in Clyſters.

Dr. *Hillary* diſapproves of the Uſe of Bliſters in the advanced State of theſe Fevers.

moved theſe Symptoms.—Frequently after the Operation of the Emetic, the Patient had ſome looſe Stools, from the Gall Bladder's being emptied in the Strainings to vomit. Such Stools were always bilious, as were commonly thoſe procured by purgative Medicines.

After emptying the Bowels, we gave the cooling, and mild Daphoretics, ſuch as the ſaline and mindereri Draughts, joined occaſionally with Nitre, or the Contrayerva Powders; while we made the Patient drink plentifully of warm diluting Liquors; which we found to anſwer in general better than any other Remedies: They brought the Remiſſions to be more evident, and the Paroxyſms to be milder, at the ſame Time that they kept up a free Perſpiration, as a Means to carry off the Diſtemper.

In ſome Caſes we gave the Antimonial Powder, made of one Part of Tartar Emetic, and ten of the *pulvis e chelis*, in ſmall Doſes, from two to four Grains every four or ſix Hours. The firſt Doſes of this Powder ſometimes made the Patient ſick, and acted as a Purgative, and

kept

kept up a free Perſpiration; at other Times, it produced no viſible Effect. In ſome Caſes, where it was given early, it operated both by Stool, and as a Diaphoretic, and removed the Fever (*f*); and it was of Uſe in others, towards the

(*f*) Dr. *Millar*, one of the Phyſicians to the Army, told me in *Germany*, that he had given this antimonial Powder with great Succeſs in the Remitting Fever, while the Eighth Regiment of Foot (to which he was formerly Surgeon) lay in *England*.—Dr. *Pringle*, in his fourth Edition of his *Obſervations*, Part iii. ch. iv. tells us, that having given a mild Purge immediately after Bleeding, he next Morning, when there was almoſt always a Remiſſion, gave a Grain of the Tartar Emetic, with twelve Grains of Crabs-Eyes, and repeated the Doſe in two Hours, if the firſt had little or no Effect; at any Rate, in four Hours. This Medicine not only vomited, but generally opened the Body, and raiſed a Sweat. By theſe Evacuations, the Fever was ſometimes quite removed, but always became eaſier.—This Medicine he uſually repeated the ſecond or third Day; if not, he opened the Body with ſome mild Laxative, or a Clyſter; and continued this Medicine, till the Fever went gadually off, or intermitted.—Dr. *Pringle* ſays, that Dr. *Huck* treated this Fever in a Method ſimilar to this, both in *North America* and in the *Weſt Indies*. In the Beginning he let Blood; and in the firſt Remiſſion, gave four or five Grains of Ipecacuana, with Half a Grain of Tartar Emetic: This Medicine he repeated in two Hours, taking Care that the Patient ſhould not drink before the ſecond Doſe; for by that Means the Medicine paſſed

the Decline of the Fever; but we were often obliged to lay it aſide; for it either acted too roughly, or produced no viſible Effect or Alteration in the Diſorder.

When the Fever came to remit, we were obliged, for the moſt part, to continue the Uſe of the mild Diaphoretics, as before; for, although the Diſorder put on a remitting Form, the Bark had very little Effect in ſtopping it (*g*), unleſs

paſſed more readily into the Bowels, before it operated by vomiting. If, after two Hours more, the Operation either Way was ſmall, he gave a third Doſe; which commonly had a good Effect in carrying off the Bile; and then the Fever either went quite off, or intermitted ſo far as to admit the Bark. On the Continent he found no Difficulty after the Intermiſſion; but in the Iſlands, unleſs he gave the Bark upon the firſt Intermiſſion, though imperfect, the Fever was apt to aſſume a continual and dangerous Form. Dr. *Huck* never varied this Method, but upon a ſtronger Indication to purge, than to vomit. In which Caſe he made an eight Ounce Decoction, with Half an Ounce of *Tamarinds*, two Ounces of *Manna*, and two Grains of *Emetic Tartar*; and dividing this into four Parts, he gave one every Hour, till the Medicine operated by Stool.

(*g*) Dr. *Hillary*, in mentioning the Remitting Fever of the Iſland of *Barbadoes*, ſays: In thoſe who were blooded, and took an Emetic afterwards, and then the ſaline Draughts, the Fever

unleſs where the Fever changed into a regular Quotidian or Tertian Ague.——In the Year 1761, very few of theſe Fevers turned to regular Intermittents; but, in the Year 1762, the greater Part of them terminated in regular Agues, and were cured by the Bark (*b*).

In

Fever was generally carried quite off by a critical Sweat on the ſeventh or ninth Day; in ſome few it came to intermit regularly after that Time; and was ſoon cured by the *cortex Peruviana*, given with the ſaline Draughts, and ſeldom effectually without them; though theſe irregular ingeminated Fevers often remitted, and ſometimes ſeemed to intermit; yet if the *cortex Peruviana* was given too ſoon in the Diſeaſe, before it intermitted regularly (as I have more than once ſeen, where it had been injudiciouſly given), it generally cauſed the Fever to become continual and malignant. *Obſervat. on the epidemic Diſeaſes of Barbadoes*, p. 22.

(*b*) Mr. *Cleghorn*, after giving a very accurate Account of Tertian Fevers, as they appeared in their various Forms of true, of double, and tripple Tertians, and of Semi-Tertians, in the Iſland of *Minorca*, tells us, that he firſt attempted the Cure by profuſe Evacuations; but afterwards learnt from Experience, that they were unneceſſary; and that Bleeding and Purging once or twice in the Beginning, was all that was in general requiſite; and if on the fifth Day the third Revolution was not attended with more threatening Symptoms than the ſecond, and the Patient bore it eaſily, he frequently truſted the whole Buſineſs to Nature; which commonly terminated the Fever about the

In the Year 1761, we tried the Bark in various Forms in many Caſes, where the Patient had been blooded and purged in the Beginning, and uſed the cooling Medicines; and where the

the fourth or fifth Revolution; and for the moſt part with an Increaſe of ſome natural Evacuation.—But if the Paroxyſm on the fifth Day was the longeſt and moſt ſevere that happened, attended with any doubtful or dangerous Symptom, he ordered two Scruples of the Cortex to be given every two or three Hours; ſo that five or ſix Drachms may be taken before next Day at Noon; leſt, if this Interval eſcaped, he ſhould not have found a favourable Opportunity of giving a ſufficient Quantity of the Medicine afterwards; as the Fits about this Period are wont to become double, ſubintrant, or continual.——This did not always put an immediate Stop to the Fever, but it invigorated the Powers of the Body, and prevented or removed the dangerous Symptoms. Having given the Bark on the fifth Day, if a Fit came on the ſixth, and declined the ſame Evening, he gave ſome more Doſes of the Bark to mitigate the Fit on the ſeventh; yet ſometimes this Fit of the ſixth united with that of the ſeventh, and the Patient had the Heat, Reſtleſſneſs, Raving, and other Complaints, greatly augmented, and the Caſe ſeemed more deſperate than ever; which, however, were more dangerous in Appearance than Reality, and went off with a profuſe Sweat next Morning; after which he gave the Bark freely as before; and this either ſtopt the Fits, or made them ſo moderate, as that they yielded quickly to the ſame Sort of Management.—By this Method, when Aſſiſtance is called timely, *Mr. Cleghorn* ſays, the moſt formidable Intermitting and Remitting

the Remiſſions were very clear: Yet it had no Effect in removing the Diſorder, except in two or three Caſes at *Munſter*, where the Paroxyſms aſſumed a tertian Form; for the moſt part, it made the Patients more hot and feveriſh, and we were obliged to leave off uſing it, as it was in Danger of changing the remittent into a continued Fever. However, it was of Service after the Fever came to a Criſis, and was going off; and Dr. *Pringle* has very juſtly obſerved, that it haſtened the Recovery, and that thoſe who uſed it were leſs ſubject to Relapſes than ſuch as did not; and therefore we commonly gave it in a convaleſcent State.— Before giving the Bark, I always found it of Advantage to give a Doſe of Rhubarb, or of ſome other Purgative, or to mix ſome Rhubarb with the firſt Doſes, ſo as to procure the Patient ſome looſe Stools.

When either the Fever went on without Intermiſſion, or changed into a continued

ting Tertians, may be certainly and ſpeedily brought to a happy Concluſion about the End of the firſt Week, or Beginning of the ſecond. See *Obſerv. on the epidemic Diſeaſes in Minorca*, chap. iii. p. 187, *&c.*

Form,

Form, or the Patient continued hot and feverish through the Day, with a Head-Ach, and other feverish Symptoms, nothing answered better, after free Evacuations had been made, than to apply a large Blister to the Back; and to make the Patient drink freely of cooling diluting Liquors; which generally relieved the Head, and abated the Violence of the other Symptoms.

When a Purging came on in the Course of this Disorder, if there was much Fever, with a strong throbbing Pulse, Gripes and Pain of the Bowels, some Blood was taken away; and immediately after the Patient took a Dose of Salts and Manna, or of Rhubarb; and an Opiate in the Evening after its Operation: But if there was little or no Fever, or sharp Pain, Bleeding was omitted; and if the Patient complained of Sickness, a few Grains of Ipecacuana were given previous to the Purge.

After this, if the Purging was moderate, and did not sink the Patient, we did nothing to stop it; but if it was violent, we gave the mindereri Draughts with Mithridate, and the Chalk

Julep

Julep in the Day, and an Opiate at going to Reſt; and occaſionally uſed the emollient and anodyne Clyſter; and, if neceſſary, repeated the Emetic and Purge.

The Hiccup ſeldom appeared in this Fever till the Patient was reduced very low, and was commonly the Forerunner of Death. Some few, who had a Purging and Vomiting, were taken with a Hiccup, attended with Sickneſs, and Load at the Stomach, which ſeemed to depend on bilious Humours lodged in the Stomach and Bowels. This induced me to give a few Grains of the Ipecacuana; and to make the Patients drink an Infuſion of Camomile Flowers till they vomited freely, and afterwards to take ſome mild Purge, or uſe laxative Clyſters; after which they found themſelves eaſier, and an anodyne Draught, with twenty or twenty-five Drops of the *tinctura thebaica*, put an End to the Hiccup. Others required the Uſe of Cordial Draughts, mixed with Opiates; and repeated Clyſters and Fomentations, before they found Relief.—— The Application of a Bliſter removed the Hiccup

cup in one, after the above Remedies had proved ineffectual; as did the Muſk Julep with Opium, and the Application of an aromatic Plaiſter to the Stomach, in another Patient.

Several of them complained of a burning Heat and Pain in making Water; which commonly went off by drinking freely of the Gum Arabic Decoction, with the dulcified Spirit of Nitre, and the Uſe of oily Draughts; though in ſome it required the Aſſiſtance of Opiates, and of Fomentations and Clyſters, before it was got the better of.

The Symptom of Worms we were often obliged to neglect till the Fever was over, and then we treated it as formerly mentioned.

The Deafneſs, though not near ſo frequent in this as the Malignant Fever, was rather a favourable Symptom, and moſtly went away of itſelf; though in a few Caſes, where it continued long, we applied Bliſters behind the Ears, or to the Neck, with Advantage.

Many, eſpecially thoſe who were brought low, complained, after the Criſis of the Fever, of Reſtleſſneſs, and Want of Sleep; which, however,

however, went off as their Strength returned: Where it fatigued them much, and kept them low, we gave a Cordial anodyne Draught at Night; and if that did not anſwer, commonly the Addition of a few Glaſſes of Wine in the Afternoon had the deſired Effect.

Others, in their convaleſcent State, complained of ſuch a Giddineſs, and Lightneſs of the Head, that they could neither walk nor ſtand; others, of a Dimneſs of the Eyes. Theſe Symptoms, for the moſt part, went off as the Patients gathered Strength: The Uſe of the Bark, with now and then a Glaſs of Wine, haſtened the Cure; and in two or three Caſes we were obliged to give a Doſe or two of ſome gentle Phyſic, and to apply a Bliſter, before the Patient got the better of them.

As the Sick were recovering, it was common for them to complain of Pains of the Shoulders, Arms, and Legs, which alſo left them as they recovered their Strength; where they did not, the ſaline Draughts, and a low Diet, generally had a good Effect; and where it had not, we treated them as rheumatic Complaints.

When the yellowiſh Colour of the Countenance remained after the Fever, we kept the Patient on a low Diet; and his Body open by Means of the ſaline Draughts, with a few Grains of Rhubarb, or by giving Half a Drachm, or two Scruples of the Soap Pills with Rhubarb daily; which, for the moſt part, removed the Yellowneſs ſoon. Two only had a Jaundice remain after the Fever, and both were cured in a ſhort Time.

In other Reſpects, the Treatment of this Fever, when it degenerated into a continued Form, had nothing particular in it; nor differed from the common Practice of giving cooling Medicines when the Fever was high, and ſupporting Nature by the Uſe of Cordials and Wine, and the Application of Bliſters, *&c.* when low; and promoting ſuch Evacuations as Nature pointed out for a Criſis.

OF THE

Intermitting Fever, or Ague.

THIS Diſorder belongs to the ſame Tribe of Diſeaſes as the Remitting Fever. We call it an Intermitting Fever, or Ague, when the Paroxyſms are diſtinct, begin with a cold and hot Fit, and go off with a Sweat; and the Patient is cool, and free from the Fever in the Intervals between the Fits.

Many have been the Cauſes alledged to produce this Diſorder. The great Quantity of Bile that is often thrown up in the Fit, has cauſed it to be ranked among the bilious Diſeaſes; and the Seaſons of the Year in which it is moſt frequent, and the low moiſt Situation of the Places where it is endemic, have made Practitioners ſuſpect, that an obſtructed Perſpi-

ration, and a Tendency in the Juices to the Putreſcent, are the Cauſe of it.

But whatever Cauſe we may ſuppoſe to give Riſe to the firſt feveriſh Fit, it is difficult from hence to account for the regular Returns of the Paroxyſms and Intermiſſions: For my own Part, after conſidering Intermittents, which obſerved a regular *Type* in the Courſe of a Salivation (*a*); their being ſo eaſily ſtopt by the Bark without any ſenſible Evacuation; their being ſometimes put away by a Stimulus externally applied (*b*), or by a Fright, or ſudden Plunge into cold Water (*c*); their returning

(*a*) See *Van Sweiten*, Vol. II. p. 537.

(*b*) A Gentleman told me, that he was once cured of an Ague in the Country, by applying a Poultice of Garlic to his Wriſts, and letting it lie on till it inflamed and bliſtered the Part.—I have ſeen Bliſters cure an Ague.—In the *Edinburgh Med. Eſſays*, Vol. II. Art. v. we have an Account of Agues being cured by the Application of Poultices of recent Erigerum (Groundſel) applied to the Stomach on the Days free from the Paroxyſm, which cauſed ſtrong Vomiting.

(*c*) See an Account of an Ague being cured by the Patient being puſhed into a Pool of Water without any previous Notice, and being much frightened, in *Maſon's Account of Agues*, p. 222.

after

after ſlight Errors in Diet, and ſometimes by the Operation of a Purge, or of Bleeding; their attacking ſometimes only particular Parts, and many ſuch Accidents in theſe Fevers, I muſt confeſs, that I am unable to form any Idea, either of their Origin, Seat, or Cauſe (*d*).

The Soldiers were ſubject to this Diſorder, particularly in Spring, if they took the Field ſoon, and in Autumn: The Frequency of it was in a great Meaſure determined by the Nature of the Ground on which they were encamped, or the Situation of the Garriſon or Town in which they were quartered; for the lower and moiſter the Camp or Garriſon, and the more

(*d*) The common Account given of the Cauſe of Agues, and of the regular Return of their Paroxyſms, has been: That the Ague takes its Riſe from ſome Sort of Matter, bilious, or whatever it may be, either mixed with the Blood, or lodged in the Bowels, or in ſome other Part of the Body; that a great Part of this Matter is thrown out of the Body, in the Time of the Paroxyſm; but that ſo much remains as ſerves by Way of a Ferment to aſſimilate other Particles to its own Nature; which, when collected in a certain Quantity, produce a new Fit; and, according to the Time that it takes to produce this Quantity, the Diſorder aſſumes the Form of a Quotidian, Tertian, or Quartan Ague.

moiſt the Seaſon, the more ſubject an Army is to Agues; and the drier the Situation of the Camp or Garriſon, and the finer and drier the Weather is, the freer they are from Diſorders of this Kind.

In Winter 1761, we had but very few Agues in the Hoſpitals; but on the Return of the Troops from the Expedition into *Heſſe-Caſſel*, and during the Spring, ſome (though not many) were attacked with Quotidian and Tertian Agues, and but very few with Quartans.—In *July* and *Auguſt* they were more frequent, and accompanied with more bilious Symptoms. At *Bremen*, during the latter End of Autumn, and throughout the Winter and Spring 1762, we had Agues of all Sorts, and many inveterate Caſes; and all this Spring, and during the Summer and Autumn, the Ague was the epidemic Diſorder all over *Weſtphalia*, as well as among the Troops.

In Spring 1761, what Agues we had were moſtly Tertian, ſome Quotidian, and but two or three of the Quartan Kind. They were, for the moſt part, mild, and yielded to the Bark.

—Some

—Some of them began in the Form of a continued Fever; but after Bleeding, and the Uſe of the cooling Medicines for a few Days, they began to remit, and at laſt ended in regular Quotidian or Tertian Agues: Others, at firſt, appeared in Form of Remittent Fevers, attended with a ſtrong throbbing Pulſe; but changed to regular Intermittents by purſuing the antiphlogiſtic Method of Cure; and ſome from the Beginning aſſumed the Type of Quotidian or Tertian Agues, but often attended with a good deal of Fever, for the firſt two or three Days; and ſome had a ſlight Delirium in the Time of the Paroxyſms, and the Pulſe was not quite ſettled in the Intervals. In ſuch Caſes, where the Patient was ſtrong, nothing anſwered ſo well as to take away ſome Blood; and to give the ſaline Draughts with Nitre till the Fever was moderated, before we gave the Bark.

In general, there is a Prejudice againſt bleeding in Agues, after they become regular; but I have always obſerved, both in *England* and in *Germany*, that where Patients are ſtrong and

plethoric, and the Fever in the Paroxyſms riſes high, or the Pulſe remains quick in the Intervals, that taking away more or leſs Blood, and giving the antiphlogiſtic Medicines in the Beginning, eaſed the Patient, moderated the Fever, and made it ſafer to give the Bark ſoon; and I never ſaw the leaſt Inconvenience from the Practice; but, on the contrary, have ſeen ſeveral Intermittent Fevers change into continued ones from the Neglect of this Evacuation; and have ſeen Caſes where the Bark, inſtead of ſtopping the Ague, rather increaſed the Fever, till the Patient was blooded, and had purſued the antiphlogiſtic Method for ſome Time; after which the Bark had its proper Effect, and put an End to the Diſorder.

As ſoon as theſe Agues became regular, and the Patient was quite cool, and free from any Fever in the Intervals, we gave the Bark; which ſoon put a Stop to the Paroxyſms, without the leaſt bad Conſequences; but, before giving the Bark, we always took Care to empty the firſt Paſſages by the Uſe of Emetics and Purgatives, where there was no Symptom to forbid

forbid their Uſe: In Caſes where the Patient was weak, and the Fits ſo violent as to make it neceſſary to ſtop the Ague, before we had Time to adminiſter Emetics or Purgatives, we added ſo much Rhubarb to the firſt Doſes of the Bark as procured the Patient ſome looſe Stools, as recommended by Dr. *Mead* (*e*); which did

(*e*) Mr. *Cleghorn*, while at *Minorca*, after Evacuations, gave the Bark at the End of the third Period, as we obſerved before; but where the Fever had been neglected till about the third or fourth Period, or badly treated in the Beginning, and the Bowels were inflamed or overcharged with corrupted Gall, he was obliged to endeavour to palliate the moſt preſſing Complaints, and to watch Evening, Night, and Morning for a Remiſſion, and then immediately to fly to the Bark, as the only Remedy that could avert the Danger. If the Patient was ſtrong, he gave Half an Ounce of the Bark, with ſix Drachms of the *ſal catharticum amarum*, divided into four equal Parts, of which the Patient took one every two Hours; the Effect of which was, that the next Fit was mitigated, and an Intermiſſion commonly enſued, in which the Bark was repeated without the Purgative, to finiſh the Cure. —But where the Patient was exceſſively feeble, and there was a manifeſt Riſk of his dying in next Fit, he gave Cordials with the Bark, inſtead of the *ſal catharticum*; and endeavoured to throw in ſix or ſeven Drachms in the Space of ten or twelve Hours; he having found by Experience, that if a ſmaller Quantity is given, the Paroxyſms come on

did not prevent its ſtopping the Ague, at the ſame Time that it anſwered the End propoſed of carrying off any putrid Humours that might be lodged in the Inteſtines.

In *England*, Vernal, Quotidian, and Tertian Agues, frequently go off after Bleeding, and taking ſome Emetics and Purges, and the ſaline Draughts, and cooling Medicines, for ſome Time, without the Uſe of the Bark; but in *Germany* very few yielded to this Treatment, and we were obliged to give the Bark (*f*) before we could put a Stop to them.

In

on earlier than uſual, and make all Attempts to preſerve Life unſucceſsful. See his *Account of the epidemic Diſeaſes of Minorca*, cap. iii. 2d edit. p. 192.

(*f*) Sometimes, when Patients are reduced low by Agues, the Stomach becomes ſo ſqueamiſh as to reject the Bark in every Shape it can be given; in ſuch Caſes, when the Ague cannot be ſtopped by other Means, it may be adminiſtered with great Advantage in Clyſters, of which the following is a very remarkable Inſtance.—*William Hadderell*, a Lad ſeventeen Years of Age, in the End of the Year 1761, was attacked with a ſevere Tertian Ague, in which a Mortification came on his left Foot, and one-half of it dropt off; notwithſtanding, his Ague continued to attack him every ſecond Day, and the Sore continued

In the End of *July*, and Beginning of *Auguſt*, the aguiſh Caſes we had at *Munſter* continued to be of the Quotidian or Tertian Kind. The greateſt Part of them began in the Form of continued Fevers, tending more to the bilious Kind than the preceding Months, and many of the Sick had bilious Vomitings in the cold Fits; and the Agues we had in Spring, and during the Campaign 1762, were of the ſame Nature, and required the ſame Treatment.

nued running on the 12th of *October* 1763, when he was admitted into *St. George*'s Hoſpital. He was reduced extremely low; and the Sore of his Foot looked ſo bad, that it was at firſt imagined he muſt loſe his Leg. He was ordered ſome Vomits, and a Purge, and cooling Medicines, and afterwards to take the Bark freely; but his Stomach rejected it, in whatever Form it was given. Other Means were then tried to ſtop his Ague, but with no Effect, till the 7th of *November*, that I ordered two Drachms of the Powder of the Bark to be given him twice a Day in an emollient Clyſter, with Half a Drachm of the *tinctura thebaica*, which ſtopt his Ague in three Days; and he had had no Return of it on the 28th of *January* 1764, and had recruited his Health and Strength, and the Sore of his Foot was greatly leſſened. Dr. *Harvey* (who teaches Midwifery in *London*) told me, that he has cured Children of Agues by Bark Clyſters, after the Bark Waiſtcoats, and other Means uſed, had proved unſucceſsful.

Thoſe

Thoſe Caſes, which began in the Form of continued Fevers, were treated as ſuch till they began to have regular Intermiſſions; they then yielded to the Bark.

Some were attended with the Dyſentery; and the Purging and Gripes were moſt ſevere on the Days of the aguiſh Paroxyſms. In ſuch Caſes, we were frequently obliged at firſt to neglect the Ague, and to treat the Diſorder entirely as a Flux. Where there was much Fever, the Patient ſtrong, and the Pains in the Bowels acute, we ordered Bleeding; and after it a gentle Emetic, and ſome Doſes of the ſaline oily Purge, or of Rhubarb; and gentle Opiates in the Evening, and other Medicines proper in the Dyſentery, till its Violence was abated, before we gave the Bark: though in ſome Caſes, where the aguiſh Paroxyſms were very ſevere, and helped to increaſe the Purging, and the Patient was in Danger of ſinking, we gave the Bark, notwithſtanding the Flux ſtill continued; and the Method we followed was the ſame as that I formerly mentioned, where it was complicated with the Malignant Fever; which

which was to give the Bark, mixed with Diaſcord, and Opiates, or other Medicines proper for the Dyſentery, in the Intervals between the Purges.

By this Treatment, very often both the Flux and Ague went off. However, it ought to be obſerved, that unleſs the aguiſh Paroxyſms were ſevere, and in Danger of ſinking the Patient, or that the Diſorder had continued for ſome Time, and the Paroxyſms were diſtinct, we ſeldom gave the Bark till the Violence of the Flux was abated: And where-ever much Griping and Pain in the Bowels attended the Flux and Ague, there Bleeding as well as Purgatives were neceſſary, before exhibiting the Bark; which ſeldom or ever agreed with them, till there was an evident *Apurexia*, or Abſence of Fever in the Intervals between the Fits. Where theſe Cautions were neglected, the Bark generally made the Patients worſe; and we were obliged to omit it, till the Violence of the Purging was over.

Some Agues were accompanied with the Jaundice, though not in ſuch a high Degree as

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in the confirmed State of that Diſorder; and commonly in the Beginning the Pulſe continued rather quick, in the Intervals between the Paroxyſms; and the Patients complained of ſome Degree of Sickneſs for the firſt two or three Days. With thoſe the Bark always diſagreed, till the Feveriſhneſs between the aguiſh Paroxyſms was gone; and we found, that the beſt Method of treating them, was to bleed in the Beginning, if there was much Fever; and then to give a Vomit and Purge, and to repeat them, if neceſſary; and where there was no Purging, to give the ſaline Draughts, and other cooling Medicines; and to add a few Grains of Rhubarb, or to give ſo much of the *pilulæ ſaponaceæ cum rheo*, daily, as procured one or two looſe Stools.

After the Ague had regular Intermiſſions, and the Patient was quite cool, and without Fever in the Intervals, if the Diſorder did not yield to the above Treatment, which it ſeldom did, we then gave the Bark freely; even though the ſlight icteric Symptoms ſtill remained; and it put an End to the Ague, and

removed

removed the Jaundice at the ſame Time, without the leaſt Inconvenience to the Patient. In ſuch Caſes, we generally uſed to add a few Grains of Rhubarb to the firſt Doſes of the Bark; or gave the Bark made up into Pills with Soap, and added occaſionally a few Grains of Rhubarb.

Several of thoſe who had the icteric Symptoms along with the Ague, had bilious Vomitings in the Time of the cold Fit; they found themſelves ſick, with a bitter Taſte in their Mouth, before the Approach of the aguiſh Paroxyſm; and many of them, though they took Emetics, which operated freely at this Time, yet did not vomit up the Bile; but the Sickneſs and bitter Taſte continued till the cold Fit came on, when they vomited Bile in large Quantities. In ſuch Caſes, after the Uſe of Emetics and Purges, and the Ague was brought to have regular Paroxyſms, with free Intermiſſions, the Bark, given as juſt now mentioned, removed the Ague and icteric Symptoms, without the leaſt bad Conſequences.

Many

Many Practitioners of great Repute have been prejudiced againſt the Bark; and tell us, that the free Uſe of this Medicine often lays the Foundation of Obſtructions in the abdominal Viſcera, eſpecially when it has been given where there was an icteritious Colour in the Eyes and Countenance; and that, in ſuch Caſes, we ought not to give the Bark till theſe Icteric Symptoms are gone. At firſt, I was very cautious of giving it under ſuch Circumſtances; till meeting with ſome Caſes where the Paroxyſms were ſevere, and became more frequent, while the Patient was ſo low, as to be in Danger of ſinking under the Diſorder, I gave the Bark freely, as the only Remedy capable of preſerving Life; which not only ſtopt the Ague, but carried off the icteritious Symptoms (*g*), and reſtored the Patients to perfect Health.

After

(*g*) This agrees with what Mr. *Cleghorn* remarks of Tertian Fevers in his *Obſervations on the epedemic Diſeaſes of the Iſland of Minorca*, who ſays, "where there is an icteritious Colour of the "Eyes, we are likewiſe told, that the Cortex ſhould not be ad-"miniſtred; though, in my Opinion, it is for the moſt part "dangerous

After this I gave it freely, in the Manner above mentioned, to ſome Hundreds, with great Succeſs; and I never ſaw any Miſchief follow from uſing it: Indeed ſometimes, where it was given rather too ſoon, it did not ſit eaſy on the Stomach, and made the Patients hot and reſtleſs; but, by laying it aſide, theſe Effects immediately ceaſed; and generally, after a little Time, the Paroxyſms became milder and more diſtinct, when the Bark was again adminiſtered, agreed with the Stomach, and put an End to the Diſorder; and I am now convinced, from Experience, that the Caſes in which the Bark has done Miſchief, or given Riſe to Obſtructions of the abdomenal Viſcera, are but very rare; and that theſe Miſchiefs moſtly ariſe from the Obſtinacy of the Diſorder, and not from the Uſe of this Drug; for I have oftener obſerved theſe Obſtructions where little or no Bark had been uſed, than where it was given freely (*b*). What probably has given Riſe

'dangerous to delay it, after the firſt Appearance of that 'Symptom." Chap. iii. 2d edit. p. 205.

(*b*) Dr. *Pringle* takes Notice, that theſe Obſtructions hap-

Riſe to the Belief of the Bark's doing ſo much Miſchief, is, that in *Holland*, and other low fenny Countries, where Agues are endemic, they are oftentimes extremely obſtinate, and yield hardly to any Remedies; and if they are ſtopt by the Bark, they often return ſoon after, and by their long Continuance give Riſe to Obſtructions of the abdomenal *viſcera*, which have been attributed to the Uſe of this Specific.

In ſome few Caſes a Purging accompanied theſe icteric Symptoms, which we treated much in the ſame Manner as when the Ague was complicated with the Flux; we gave Emetics and Purgatives; and the mindereri Draughts with Mithridate, throughout the Day, and Opiates at Night, if the Purging was violent; if it continued, accompanied with regular aguiſh Fits, the Bark, with Aſtringents, generally removed both.

pened as often without as with the Bark; and therefore ſeemed to depend on the long Continuance and Obſtinacy of the Intermittent. *Obſerv.* part iii. chap. iv. ſect. 2. p. 179. 3d Edit.

In

In the latter Part of the Year 1761, and during Spring 1762, we had at *Bremen* many Patients in Agues of all Sorts; as Quotidians, Tertians, Quartans, and irregular Agues of a very obſtinate Nature. The Town of *Bremen* is large and well built, ſituated in a low ſandy Plain, with the *Weſer* dividing the old from the new Town; generally a conſiderable Part of the Environs is covered with Water in the Winter, and frequently the *Weſer* breaks down ſome of the Dikes, and overflows all the Country round; and every Time the River overflows its Banks, the Cellars of all the new Town, and of that Part of the old Town next the River, are filled with Water. All the Year round, on digging two or three Feet deep into the Ground, you come at Water.

Agues are endemic in this Place, and great Numbers of the lower Claſs of People are afflicted with them at all Times of the Year, eſpecially in Spring and Autumn.

Some of the Sick ſent down from the Army were bad of Agues; but the greateſt Number

we had in Hoſpitals was compoſed of ſuch as took it in Town; either from doing Duty on the Ramparts, or from lying in bad Quarters, or getting drunk and expoſing themſelves to Wet and Cold; and many Men of the invalid Companies who had come from *Embden* brought with them old inveterate tertian and quartan Agues.

Moſt of the recent Caſes were eaſily cured by the Methods already mentioned; though they often continued longer, required a greater Quantity of the Bark to ſtop them, and a longer Continuance of its Uſe to make a Cure, than at other Places, which were more dry, and higher ſituated.

The moſt obſtinate of the recent Caſes were the irregular Intermittents, which had regular Paroxyſms, but where the Pulſe was not ſettled in the Intervals; which we were obliged to treat as Remitting Fevers till the Paroxyſms became quite diſtinct, and the Patient was cool and free from any Fever in the Intervals; after which they commonly yielded to the Bark.

But

But many of thoſe Agues which had continued for ſome Time, eſpecially with thoſe Invalids who came from *Embden*, or who had brought on frequent Relapſes by their own Irregularities, were very obſtinate. With many the Bark had no Effect; and its Uſe perſiſted in ſeeming rather to exaſperate the Paroxyſms, and to do Hurt. Nor had almoſt any Remedy we tried a better Effect. We gave the following Medicines to divers Patients; the ſaline Draughts and cooling Medicines; Infuſions of Camomile Flowers and of other Bitters; Dr. *Morton*'s Powders of Camomile Flowers, Salt of Wormwood, and diaphoretic Antimony; Dr. *Mead*'s Powders of Camomile Flowers, Salt of Wormwood, Myrrh, and Alum; Alum and Nutmeg; large Doſes of *ſal ammoniac*; large Quantities of Spirits of Hartſhorn; the antimonial Drops and Powders; to ſome we gave Emetics, both in the Intervals and immediately before the Fits. In ſome we tried to promote Sweats before the Approach of the Fits, by making them drink freely of warm Liquors while

they kept in Bed, and took diaphoretic Medicines; and to others we applied Blisters.—But all did not put a Stop to some of those Agues.

With some the Disorder continued till it broke down the Crasis of the Blood, and brought on a general Relaxation of the Fibres; and the Patients became cachectic, and fell into Dropsies, or were seized with Diarrhœas, of which they died. Some had Obstructions formed in the Liver or Spleen, or other *viscera*, and fell into the Jaundice and Dropsies, which carried them off.—In the Bodies, of several whom we opened, we found Indurations of the Liver and Spleen—in two of them Suppurations of the Liver—and in one, who had had the Ague at *Embden*, and had long complained of one of those Swellings towards the left Side of the *abdomen*, called the *Ague Cake* (*i*), the Spleen was so much enlarged as to weigh above four Pounds.

(*i*) I have seen the dead Bodies of four People opened, who had those Swellings of the left Side, commonly called the *Ague Cake*, which had come after Agues; and in all the Swelling was owing to an Enlargement of the Spleen.

Some,

Some, whoſe Conſtitutions were worn out by theſe obſtinate Agues, fell into Conſumptions and other pulmonic Diſorders in the Winter, of which they died. One Man died in the cold Fit (*k*).

Where-ever the Ague continued long, and the Bark had no Effect, we were obliged to lay it aſide, and to try other Remedies adapted to the preſent Circumſtances of the Patient.

The mild Methods ſucceeded beſt; giving the ſaline Draughts and gentle cooling Medicines to ſuch as were ſtrong and plethoric, and had the aguiſh Paroxyſms violent; and the gentle Aromatics and Bitters, or Chalybeats, to thoſe of a weakly Habit, or whoſe Fibres had been much relaxed, and their Con-

(*k*) The cold Fit is the moſt dangerous Time of the Paroxyſm, and the greateſt Part of thoſe who die of Agues die at this Time; one or two Inſtances of which I ſaw in the Military Hoſpital at *Edinburgh* in the Year 1746.—*Van Swieten* ſays he has ſeen the trembling and ſhaking ſo great in the Time of the cold Fit of Quartans, that the Teeth have dropt out of the Head. *Comment. in ſect.* 749. *Aphoriſm. Boerhaav.* vol. II. p. 511.

ſtitutions greatly injured by this or any other preceding Diſorder.

During theſe Courſes, we gave at Times gentle Emetics; and if the Patient complained of Gripes and Purging, which they frequently did, in the Courſe of this Diſorder, we gave a Doſe of Rhubarb, or of ſome other mild Purge; and after it other Medicines proper for this Complaint.

By theſe Methods frequently the aguiſh Paroxyſms became gradually milder, and at laſt vaniſhed. At other Times, after they had continued for five or ſix Weeks, we again gave the Bark, and found it to have the proper Effect. With others they continued thro' the Winter, and went off of themſelves in the Spring. With others they ſtill continued; and as no Medicines nor Time ſeemed to have any Effect in that Country, we recommended their being ſent over to *England* for Change of Air, as the only Means likely to remove the Diſorder.

Two Agues which had reſiſted the Uſe of the Bark were cured by Powder of Camomile-

Flowers,

Flowers, Salt of Wormwood, and diaphoretic Antimony; and one by the Uſe of the aluminous Powders, with Myrrh.—One Invalid, who had long been ill of an obſtinate Tertian, on catching Cold, was ſeized with an Inflammation of his Throat, for which he was blooded, and took a mild Purge; next Day there appeared a Swelling of one of the parotid Glands, which we endeavoured to bring to Maturation, by the Application of emollient Cataplaſms; after ſome Days it went entirely away, without coming to Suppuration; but as there remained ſtill a Confuſion of the Head, and a Quickneſs of the Pulſe, a large Bliſter was applied to the Back, which continued running for ſome Days; after it dried up he fell into a Fit reſembling that of an Epilepſy, and next Day had another Fit of the ſame kind; from the Time the Swelling firſt appeared till the Time he had the firſt Fit, he had no Ague, but it returned the ſecond Day after the ſecond epileptic Fit; another Bliſter was applied, and he had no Return of the epileptic Fits, though his Ague continued obſti-

nate

nate till *March*, at which Time he was ſent to *England* (*l*).—About the ſame Time the aguiſh Fits of two others were ſtopt by the Application of Bliſters, though they returned in both ſoon after.

Excepting in theſe few Caſes, I found no Medicines effectual in ſtopping thoſe Agues, which had reſiſted the Bark when properly given, though we tried a vaſt Variety in different Caſes. The *cortex caſcarillæ*, or *eleutheriæ*, was given freely, both in Decoction and Subſtance, in four Caſes, which had not yielded to the Bark, but without producing any good Effect; we had not an Opportunity

(*l*) On the 29th of *Auguſt* 1759, a Man (*Murdoch Brinnen*) about thirty Years of Age, was admitted into *St. George*'s Hoſpital for a very large Swelling of the parotid Glands and neighbouring Parts, which had come three Days before, after a Fit of the Tertian Ague, which did not return afterwards. The Swelling was diſcuſſed by the Application of emollient Cataplaſms, which were intended to have brought it to Suppuration. He had no Return of the Ague, nor did any bad Conſequence follow the Diſcuſſion of the Tumour, and the Cure was completed by a few Doſes of Phyſic, and a Decoction of the Bark, which reſtored him to his Strength, and carried off the little Heat and Feveriſhneſs which remained.

of

of trying this Bark in more Caſes of this kind, nor in Fluxes, the ſmall Quantity of it which had come from *England* being all expended.

A Soldier of one of the Regiments of Guards, who was admitted into the Hoſpital for œdematous Legs, and the Remains of a very bad Flux, which he had had ever ſince the preceding Autumn; after being cured of the Flux, and moſt of the œdematous Swellings, was ſeized with an intermitting Complaint in *February*. He had no regular hot and cold Fits; but every ſecond Day, after a ſlight Shivering and Cold, he was ſeized with Gripes and a Purging. In one or two of the Fits his Pulſe was very quick, and the Pain of the Bowels very acute and ſevere; which obliged us to blood him, and give him a Doſe of the ſaline oily Purge; after which we treated the Diſorder as a Flux complicated with the Ague, and gave the Bark mixed with Diaſcord, and gentle Opiates at Nights, and at Times gentle Purgatives; the Ague and Diarrhœa ſtopt very ſoon, and in a few Weeks he got free of all Complaints, though he ſtill continued weak,

till

till he was ſent to *England*, about the Beginning of *April*.

Many, eſpecially thoſe whoſe Conſtitution had been ſhaken by this or ſome other Diſorder, complained of flatulent Swellings of the Stomach and Bowels, which affected them either while the Ague continued, or ſoon after it was ſtopped, and were very troubleſome and uneaſy. For the moſt part, theſe Swellings were removed by the Uſe of cordial Medicines mixed with the Bark, or a Courſe of Bitters, and ſome Doſes of Rhubarb given at proper Intervals. In ſome Caſes, where they were attended with Sickneſs, and the Stomach ſeemed to be loaded, a Vomit gave Relief. Very often theſe Symptoms continued for Weeks after the Ague had left them, and did not go entirely off, till the Patient recovered his Strength.

In *February*, *March*, and *April*, 1761, ſeverals of the Soldiers in the Hoſpital at *Paderborn* complained of periodical Head-Achs, which returned in moſt, every Day; in others, only every ſecond; and afterwards Caſes of this

this Kind occurred at different Times as long as the Army continued in *Germany*. Theſe Head-Achs generally began in the Forenoon, were very violent while they laſted, and confined the Patient to his Bed for ſome Hours. During the Pain, the Pulſe was quick; but in the Intervals the Patients were quite cool, and without Fever. Sometimes, tho' not always, the Urine depoſited a little Sediment as the Head-Ach was going off. Commonly the Pain was all over the Head, but moſt ſevere in the Forehead; though ſometimes it was confined to one Side only.

Theſe Head-Achs we treated entirely as Agues of the ſame Type. When the Patient was ſtrong, ſome Blood was taken away, and afterwards we preſcribed an Emetic and Purge, and then gave the Bark liberally, which generally put an End to the Complaint, without any bad Conſequences attending.

OF THE

JAUNDICE.

THE Jaundice, or a yellow Colour of the Eyes and Skin, occaſioned by an Abſorption of Bile into the Blood, was another Diſtemper which appeared towards the End of each Campaign.

This Diſorder, for the moſt part, takes its Riſe (*a*) from Calculi lodged in the biliary Ducts (*b*); and ſometimes from a viſcid Mucus or

(*a*) Obſtructions and Scirrhi of the Liver have been aſſigned as the Cauſe of the Jaundice; but as we have ſo many Caſes of this Kind related where no Jaundice appeared, it is now much doubted, whether ſuch Obſtructions, which do not affect the Ducts, are capable of producing this Diſorder.

(*b*) We have numerous Caſes in *Bonetus*, and other phyſical Obſervations, where Calculi have been found in the Gall Bladder,

or Pituita obſtructing thoſe Paſſages (*c*); and it may be brought on by a Tumour, or any other Cauſe (*d*), compreſſing theſe Ducts, ſo as to prevent the free Flow of the Bile into the Cavity of the Inteſtines.

The yellow Colour, or Jaundice, obſerved in the Ague, and ſome other bilious Diſorders, ſeems to ariſe ſometimes from Spaſms of the Ducts; or from too great a Quantity of Bile ſecreted and abſorbed into the Blood, which ſeems evidently to be the Caſe where large

der, and Ducts of People who have died of the Jaundice; and I have frequently found two, three, and ſometimes twelve, fifteen, or twenty, ſuch bilious Calculi in theſe Cavities.

(*c*) Viſcid Mucus or Pituita, or viſcid Bile, has been obſerved frequently to obſtruct the Ducts. Dr. *Coe* ſays, ſometimes icteric Patients diſcharge very thick Bile, almoſt as viſcid as Bird-Lime. See his *Treatiſe on biliary Concretions*, chap. ii. where he has collected a great Number of icteric Caſes, in which the Bile has been found quite viſcid after Death.

(*d*) See the Caſe of a Jaundice in *Bonetus*'s *Sepulchretum Anatomicum*, tom. II. p. 326, where the Sides of the common biliary Duct were compreſſed by an Enlargement of the Glands about the *vena poſtarum*; and we ſometimes meet with a Jaundice in pregnant Women which goes off after Delivery, and ſeems to have been cauſed by the Preſſure of the Uterus and indurated Fœces in the Colon. *Van Sweiten* ſays, he has ſeen this very frequently, vol. III. ſect. 918, p. 95.

Quan-

Quantities of Bile are either vomited or discharged by Stool; a Proof that the biliary Ducts are clear, and free from Obſtructions.

In the End of the Campaign of 1760, after a continued Rain for many Weeks, the Jaundice had been very frequent, and in a Manner epidemical, among the Troops, for ſome Time before they left the Field; and in paſſing thro' *Munſter*, about the End of *December*, I obſerved ſeveral ill of that Diſtemper in Hoſpitals, and met with a few Caſes of this Kind in the Hoſpitals at *Paderborn* in *January* 1761; but during the Spring and Summer, we had only one or two now and then ſent to the Hoſpitals for this Complaint; though towards the End of the Campaign it became more frequent, and ſeveral were ſent down to *Bremen*; and ſome of the Garriſon were likewiſe affected with it. During the Winter not above four or five were ſent to the Hoſpitals I attended, and but a few to the flying Hoſpital, during the Campaign 1762. It frequently appeared in dropſical Caſes, depending on obſtructed Viſcera.

Thoſe

Thoſe in whom the Jaundice was the original Diſorder, and not complicated with any other, generally got well ſoon; but where it appeared in dropſical Caſes, depending on obſtructed Viſcera, it was commonly fatal.

In the Beginning of this Diſeaſe, Patients uſually complained of Sickneſs, Heat, Thirſt, and other feveriſh Symptoms; and ſome had a Vomiting, and Pain of the Stomach, for a Day or two before the Jaundice appeared; the Urine was always of a deep Colour from the firſt; and about the ſecond or third Day the Skin, and the Whites of the Eyes, began to be tinged with a yellow Colour, attended with the common Symptoms of this Diſorder.

Such was the Manner in which the Jaundice began in thoſe who were taken ill in Garriſon; but thoſe ſent us from the Army could ſeldom give any accurate Account of their own Caſes.

In the Courſe of this Diſorder, the Sick were inclined to be coſtive, though ſome few had a Diarrhœa; ſeveral, who had been reduced by Fevers, or other Complaints, before the

Jaundice appeared, were attacked with violent Hœmorrhages from the Noſe; and two had like to have died of them before the Bleeding was ſtopped. The Hœmorrhages did not prove critical, but ſeemed to depend on a diſſolved State of the Blood.

On the Patient's being firſt taken ill, if he was plethoric or feveriſh, or complained of Pain, attended with Sickneſs and Vomiting, ſome Blood was taken away. Next Day we gave twenty-five or thirty Grains of Rhubarb in a ſaline Draught, and afterwards the common ſaline and other cooling Medicines, till the Fever was abated. If the Pain and Fever did not abate, a Vein was opened a ſecond Time, and a few Drops of the *tinctura thebaica* were added to the ſaline Draughts, while emollient Clyſters were frequently adminiſtered, and the Stomach and Belly fomented with Flannels dipped in warm emollient Decoctions.

When the Pain and Fever were gone, we then gave a gentle Vomit in the Evening, and next Day a Doſe of Rhubarb; and afterwards

ſo

ſo much of the *pilulæ ſaponaceæ cum rheo* daily as kept the Body open; or the ſaline Draughts with five or ſix Grains of Rhubarb in each, or ſuch a Quantity as anſwered the ſame Purpoſe as the Pills; and from Time to Time repeated the Emetic (*e*) and Purge.

Moſt

(*e*) Vomits are reckoned amongſt the moſt efficacious Remedies in this Diſorder, and I have often ſeen good Effects follow their Uſe.—*Janet Crags*, a Woman thirty Years of Age, was, on the 21ſt of *December* 1758, admitted into *St. George*'s Hoſpital for a Jaundice of ſome Months Continuance. Her Eyes and Skin were not of the common icteric Colour, but of a dark livid yellow, for which Reaſon both ſhe and the Nurſes termed her Diſorder the Black Jaundice. She at firſt complained of a Difficulty of Breathing, and a Weight and Oppreſſion about the Region of the Liver, for which ſhe was blooded, took ſome Doſes of Phyſick, and the Soap Pills with Rhubarb; but theſe produced no Change in her Complaints. On the 29th ſhe had a Cough, and complained much of Sickneſs and Difficulty of Breathing, for which ſhe was ordered a Vomit, and afterwards to take the Squill Draught Morning and Evening, which occaſioned a Purging and Gripes. On the 5th of *January* 1759, the Looſeneſs ſtill continuing, I ordered her to leave off the Uſe of the Squill Draughts, and to take only ſome Rhubarb in an oily Draught every Night at Bed-Time. On the 8th, tho' the Purging had increaſed, I did not chuſe to check it, as I ſuſpected it would prove a Criſis to the Diſorder, and therefore only ordered her the Cordial Draughts and Wine to ſupport

Moſt of the icteric Caſes we had, which were not complicated with other Diſorders, yielded to the above Treatment in about twelve or fourteen Days. Two or three remained obſtinate for a longer Time. To one I ordered a Quart of the pectoral Decoction, made with Parſly Roots inſtead of the Linſeed, to be drunk daily along with the Soap Pills; and the Jaundice diſappeared in about eight or ten Days. One who had the Diſeaſe more obſtinate than the reſt, and complained for ſome Time of a Tenſion and Uneaſineſs about the Liver, was

her Strength. The Looſeneſs continued till the 15th, when moſt of the icteric Symptoms were gone, and by the 30th they entirely diſappeared. However, ſhe continued low, and ſubject to Flatulencies for ſome Months afterwards, which were at laſt removed by the continued Uſe of Cordials, gentle Bitters, a nouriſhing Diet, and repeated Doſes of Rhubarb; and on the 2d of *May* ſhe was diſcharged in a firm State of Health.

Dr. *Coe* ſays, "I have more Reaſon to be ſatisfied of the "Effect of Vomits in diſlodging theſe Calculi, than of any "other, or indeed of all other Medicines." *Treatiſe on biliary Concretions*, chap. ii. p. 253. Beſides viſcid Humours, which Vomits bring away from the biliary Paſſages, how often are Gall Stones likewiſe found in the Stools after the Operation of a Vomit? *Ibid.* p. 256.

ordered

ordered to have the right Side fomented Morning and Evening, and to rub it for ſome Time after with the *linimentum Japonaceum*, and to drink the Decoction of Sarſaparilla after the Soap Pills; and by continuing this Courſe for about three Weeks, the Diſorder went off (*f*).

The

(*f*) Sometimes the warm Bath has a good Effect after other Remedies have afforded no Relief. In the Year 1743, a young Gentleman, a Student of Phyſic at *Edinburgh*, had a Jaundice for which he had taken Variety of Medicines, and rode daily on Horſeback for ſome Weeks, without receiving any Benefit: At laſt, by my Father's Advice, he took a brisk Doſe of Phyſic, and before it began to operate had a large Quantity of warm Whey thrown up by way of a Clyſter, and went immediately into the warm Bath. In the Bath he was taken with a violent Inclination to go to Stool; and after coming out, had a great Number of bilious Stools that Day, and next Morning was ſtill inclined to be looſe; and in a few Days all the icteric Symptoms vaniſhed. On the 20th of *July* 1763, a middle aged Woman, *Elizabeth Hoſier*, was admitted into *St. George*'s Hoſpital for a Jaundice, which came about a Fortnight before. She had been blooded, and had taken ſome Medicines, before I ſaw her. I ordered her a Vomit and Purge, and to take two Scruples of the Soap Pills and Rhubarb daily; and four Days afterwards the Vomit and Purge were repeated, but without making any Change in her Diſorder. On the 29th ſhe went into the warm Bath, and took a Vomit immediately on coming out.

The Hæmorrhage from the Noſe commonly ſtopped ſoon. Where it was violent, we kept the

After the Vomit ſhe had ſome looſe Stools, and the icteric Symptoms went all off in a few Days. She continued well for ſome Months; but I have been told, that ſhe has ſince relapſed.

When the Jaundice continues obſtinate, there is hardly any Thing has often a better Effect than the continued Uſe of Decoctions of the Juices of ſucculent Plants, of Whey in the Spring, Soap, and ſuch like Medicines. The Baron *Van Sweiten* tells us, that he has cured many obſtinate Jaundices by making the Patients drink daily a Pint or two Pints of a Decoction of Graſs, Dandelion, Fumaria, Succory, and ſuch like, prepared in Whey; to each Pint of which he added Half an Ounce of *ſal polychreſt*, and an Ounce or two of Syrup of the five aperient Roots; and by ordering them to drink the Spa Water in Summer, and take freely of Soap, along with a Decoction of the aperient Roots, in Winter. In thoſe who were cured by theſe Remedies, he ſays, Stones, or a kind of a grumous calculous Matter, were always found in the Stools, as the Jaundice was going off. He relates one very particular Caſe of a Lady of ſixty Years of Age, who had had a black Jaundice for twelve Years, and was cured by continuing the Uſe of theſe Medicines for eighteen Months; during the laſt ſix Months of which ſhe had a Looſeneſs, and conſtantly diſcharged by Stool a fetid granulated Matter of the Colour of Clay;—and another ſingular Caſe of a Man who was cured by living moſtly upon Graſs, and a Decoction of it, for two Years together. The Man came at laſt to devour ſuch Quantities of it, and could

diſtin-

the Patient cool, and applied Cloths dipped in Vinegar and Water to the Noſe.——In two Caſes, one at *Munſter*, the other at *Bremen*, the Patients were hot and feveriſh, and a Vein was opened, and eight or ten Ounces of Blood taken away; and in one Caſe nothing took Effect till we gave repeated Doſes of the *tinctura ſaturnina* in a common acid Julep.

diſtinguiſh the good Sort from the bad ſo well, that the Farmers often uſed to drive him out of their Fields. Vol. III. §. 950.

Gliſſon tells us, that Cattle are ſubject to bilious Concretions in Winter, which are diſſolved and evacuated in the Spring, when they begin to move much about, and to eat the new Graſs, which purges them. *Oper.* vol. II. *Anat. Hepat.* chap. vii. p. 104.

Dr. *Ruſſel* greatly recommends the Uſe of Sea Water along with the ſaponaceous Medicines. See his *Treatiſe on the Uſe of Sea Water.*

OF

TUMOURS of the BREAST.

IN *May* 1761, a great many of the Patients, who had been in Hoſpitals the preceding Winter, had Tumours formed on the external Part of the Breaſt, which they ſhewed me at *Oſnabruck*. They began in the Form of indolent Tumours, and came ſlowly to Suppuration. For the moſt part, the Suppuration was only partial, and the Tumour, on being opened, diſcharged a very ſmall Quantity of Matter. Some of them, though they felt ſoft, and ſeemed to contain Matter, yet, upon being opened, diſcharged only a ſmall Quantity of black Blood. None of them melted down entirely into Pus, or came fully to Suppuration, and healed kindly as Abſceſſes which ſucceed acute

acute Inflammations. But after a ſmall Quantity of Matter was diſcharged, for the moſt part, there ſtill remained a hard Tumour, which felt as if it was a Swelling of the Bone, or Cartilage below; and in ſome the Surface of the Bone was found rough at the Bottom of the Abſceſs.

Theſe Tumours ſeldom roſe high, and were moſt of them ſituated at the lower Part of the Sternum, or a little to one Side of it, commonly on the left Side, above the *cartilago enſiformis*. Some Patients had only one, others two, and ſome three ſuch Tumours. The firſt of them I ſaw was on the left Side, which, on being felt, gave exactly the ſame Senſation as when the Cartilages of the Sternum are begun to be raiſed by an Aneuriſm of the Aorta; only no Pulſation was to be perceived; and moſt of them had the ſame Appearance.

The Patients, who had ſuch Tumours, commonly complained of Pains of their Breaſt. One or two, after theſe Tumours came to Suppuration, ſeemed to recover their Health, and to feel no Uneaſineſs, tho' ſome of the Swelling remained:

remained: But many of them were inclined to be hectic, and ſeemed likely to grow conſumptive.

Being ordered up to the flying Hoſpital in *June*, and the Sick going down to *Bremen*, I had no Opportunity of ſeeing the Event of theſe Tumours, or of examining the Bodies of thoſe who died with them. One I accidentally met with the following Winter at *Bremen*, who died of a Conſumption and Diarrhœa. He had a large Abſceſs, which penetrated into the Cavity of the Cheſt, and diſcharged a great Quantity of very fetid Matter, at the Part where one of theſe Tumours had been ſeated, and the Sternum and Ribs were carious all round the Abſceſs.

OF

OF

PARALYTIC COMPLAINTS.

SOME of the Soldiers, from lying out in the Nights on the wet Ground, and from doing Duty in cold rainy Weather, were ſeized with a Pain and Numbneſs all over, and loſt the Uſe of their Limbs, which in ſome was ſucceeded with a Palſy of theſe Parts: But the greateſt Number of thoſe afflicted with Paralytic Symptoms were ſeized with them either in Fevers, or after feveriſh and other Diſorders. The Number, who were attacked with Complaints of this Kind, were but few.

When Men were ſuddenly taken with Pain and Numbneſs all over, we found that the beſt Method of treating them was to put them to Bed, and give them Plenty of mild warm di-

luting

luting Liquors for Drink; and if there was much of a Fever, to open a Vein, to give the cooling antiphlogiſtic Medicines, and apply Bliſters; and if theſe Complaints ſtill remained, to endeavour to promote a breathing Sweat, by means of Diaphoretics and warm Drinks. Several who were brought to the Hoſpital, ſoon after being ſeized in this Manner, got well; but in ſome few, one or other of the Limbs would begin to waſte, and remain paralytic afterwards.

Thoſe who had the true confirmed Palſy ſeldom remained long enough with us to be cured. Two or three received Benefit from Bliſters applied to the Parts, and from Iſſues; drinking at the ſame time the Decoction of the Woods, or of Sarſaparilla, and taking the volatile Tincture of Guaiac or Valerian (*a*), and

(*a*) On *Wedneſday* the 1ſt of *February* 1764, *Margaret Julion*, a Woman between fifty and ſixty Years of Age, was admitted into *St. George*'s Hoſpital for an entire Loſs of Speech, which ſeemed to depend on a paralytic Diſorder of the Parts about the Larynx. The Account her Friends who came with her to the Hoſpital gave of her Caſe was, that ſhe had been fo:

and being ſweated by the Uſe of *Dover*'s Powder, or other Diaphoretics.

One Man of the 51ſt Regiment of Foot, after doing Duty in very cold wet Weather, in the Beginning of the Year 1762, was ſeized with a Palſy of one Side of his Face, which

for five Months troubled at Times with Pains of her Bowels, and a Purging; that on *Sunday* ſe'night before coming to the Hoſpital, ſhe had ſuddenly loſt the Uſe of her Speech, and had not ſpoke ſince that Time, though ſhe ſeemed to hear and underſtand whatever was ſaid to her. I aſked her ſome Queſtions, which ſhe anſwered diſtinctly by Signs. She had no paralytic Complaint of her Face, Arms, Legs, or any other Part of her Body, and ſwallowed both Fluids and Solids with Eaſe. She had no Fever, and ſeemed to complain of nothing but the Loſs of Speech.—A Bliſter was applied to her Neck, and ſhe was ordered the ſaline Draughts, with a Scruple of Powder of Valerian in each, to be taken three Times a-day, and a Doſe of ſacred Tincture, to be taken twice a-Week. She followed this Courſe for a Fortnight, when another Bliſter was applied to the Fore-part of the Neck, and the Powder of Valerian in the Draughts was changed for two Drachms of the *tinctura valeriana volatilis*. At the End of three Weeks ſhe could pronounce the two Words *Why*, *What*. She continued the ſame Courſe till this Day, the 16th of *March*, and can now pronounce many Words and ſhort Sentences.

prevented

prevented him from ſpeaking diſtinctly, and was an Impediment to his eating. He mended much after being blooded, and having a large Bliſter to his Neck, kept open for ſome time by means of the epiſpaſtic Ointment.

OF

OF AN

INCONTINENCY of URINE.

AN Incontinency of Urine was another Complaint frequent among the Soldiers; but it ſeemed to me to be counterfeited by many. All, who had it, ſaid that they had received ſome Hurt (*a*) or Sprain of the Back, or

(*a*) A Soldier in the Hoſpital at *Paderborn* uſed to diſcharge his Water involuntarily, and mixed with Pus, which came from ſome violent Blows he had received on the Back.

John Pearce, a young Man about eighteen Years of Age, was admitted into *St. George*'s Hoſpital, the 10th of *April* 1759, for a Pain of his Side, and a Complaint of the Bladder. The Account which he gave of his own Caſe was, that, ſome Months before, he had received a violent Blow with a Cricket-Bat on the left Side, on the Region of the Kidney; and that ever ſince he had had a ſharp Pain in that Part, and ſometimes had a Stoppage of Urine, and at other Times it came away inſenſibly.

or a Kick from a Horſe, or that a Carriage had run over them.

Thoſe

inſenſibly. His Pulſe was rather quick, but low, and he had a feveriſh Heat. He at firſt took ſome cooling Medicines; but on the 20th, being low and faint, he had ſome of the fœtid Julep. On the 23d he was attacked with a ſharp Pain in the Belly and Side, had a Stoppage in making Water, a quick and full Pulſe, and moſt of the Symptoms of the Stone. He was ordered to be blooded immediately, to take the ſaline Draughts every four Hours; and as he was inclined to be coſtive, to take as much lenitive Electuary as to procure him a looſe Stool; and it was recommended that he ſhould be ſounded as ſoon as the Violence of the Fever was over. On the 25th he continued much in the ſame Way, and had made ſome Water, which was intolerably fœtid. Half a Drachm of the dulcified Spirit of Nitre, and five Drops of the *tinctura thebaica*, were added to each of his Draughts, as the Pain and Difficulty of making Water had increaſed. On the 26th his Pulſe roſe, and became very hard and quick; the Pain in his Side, and the Dyſuria, became more violent; and about Twelve o'Clock he had a convulſive Fit, reſembling that of an Epilepſy; after coming out of the Fit, as the Fever and Pain had increaſed, he was blooded; the Belly was fomented and embrocated, and he took the oily Draughts four Times a-Day; his Blood immediately threw up a very thick Buff. He remained pretty eaſy the reſt of the Day; but about the ſame Time next Day, he had another convulſive Fit, and died.

On opening his Body, we found about two or three Pints of a dark-coloured fœtid Water in the Abdomen; on cutting through,

Thoſe who really had the Diſorder ſeemed to have received ſuch an Injury of the Bladder, or Kidneys as required a conſiderable Space of Time to get the better of; and by reaſon of the ſhort Time we had them under our Care at the flying Hoſpital, they ſeldom received

through, and ſqueezing the right Kidney, there came out a thin purulent Matter every where from its Subſtance, though it appeared ſound; on raiſing and cutting through the Peritoneum, covering the left Kidney, there was a Diſcharge of about a Pint of black and very fœtid Water, which had every where ſurrounded this Kidney; and there were ſix mortified Spots on its Surface, as large as the End of one's Finger, with a Depreſſion in each about a Quarter or Half an Inch deep; moſt of the Subſtance of this Kidney ſeemed diſeaſed, and it was full of Suppurations. The Bladder was contracted and thickened, and contained a rough Stone, which weighed three Ounces. The reſt of the *viſcera* were ſound. This Stone had certainly been in the Bladder long before the young Fellow received the Blow with the Cricket-Bat; but the Injury done the Kidney had probably aggravated the Symptoms.

I do not remember ever to have ſeen convulſive Fits, ſuch as this young Man had, in acute Diſeaſes, except in one Caſe of a ſlow Fever, which came by taking Cold after a Salivation, and which I attended, along with Dr. *Pringle*. The Gentleman had three Fits exactly of the ſame kind as this young Man, at twenty-four Hours Diſtance from one another, and he died of the third.

much Benefit. One or two thought they grew better on taking the Bark and Balſam of *Peru*; at the ſame Time they bathed Morning and Evening the lower Part of the Abdomen and Perinæum, with Flannels dipped in gentle aſtringent Liquors, applied cold. Bliſters applied to the *os ſacrum* had no Effect.

OF

OF A

STOPPAGE of URINE.

WE formerly mentioned, that in acute Diſeaſes many complained of a Stoppage or Difficulty of making Water; and others had this Complaint from Strictures of the Urethra, or Diſorders of the Bladder or Kidneys (*a*).

Where

(*a*) It is often very difficult to judge of the Cauſe, or to be able to determine exactly the Seat of theſe Diſorders before Death; as the following Caſes will ſhew.

John Waden, a middle-aged Man, was admitted into *St. George*'s Hoſpital the 10th of *April* 1759, for a Swelling of the Abdomen, and a Difficulty of making Water, which he ſaid begun about two Months before, with a violent Pain in his Back and Belly, occaſioned by his being employed in making of Cyder in a very cold Cellar. He had not had a Stool for ſome Days; at firſt he took a Doſe of Phyſic, and ſome of

Where it depended on Strictures of the Urethra, Bougies introduced into that Paſſage, and

the ſaline Draughts; but in a Day or two complained that his Belly had grown to a monſtrous Size, and that he had not made Water for above twenty-four Hours; on examining, we found the Bladder ſo much diſtended as to reach up to the Navel; and upon a Catheter's being introduced, above two Quarts of Water were drawn off, and the Swelling immediately ſubſided; but in the Afternoon was as large as before, the Bladder ſeeming to be in a paralytic State. During the Months of *May* and *June*, his Water was drawn off twice a-Day; he had his Belly fomented with emollient, aſtringent, and other Decoctions, and embrocated with Liniments; was blooded once when feveriſh, took Cordials, the Bark, Myrrh, and a Variety of Medicines, without any Effect. On the 3d of *July*, a flexible Catheter was introduced into the Bladder, and left there, in order that the Urine might drain away as faſt as it was ſecreted, and the Bladder be allowed to contract, and recover its Tone. The Catheter gave him no Pain, and he thought himſelf much eaſier by the Bladder's never being too much ſtretched; but on taking out the Catheter ſome Days after, he had the ſame Stoppage of Water as before. On conſulting with Dr. *Batt* and the other Phyſicians, it was agreed to give two Grains of the Powder of Cantharides, with three Grains of Camphor and ten of Sugar, rubbed well together in a Mortar, twice a-Day; and to continue the Uſe of the flexible Catheter. He found no Uneaſineſs or Strangury from the Uſe of the Cantharides, and thought he paſſed his Water more freely, when the Catheter was taken out; but after fourteen Days

and worn for ſome Time, were of great Service. The Patients were at the ſame time ordered

Days, finding no Change for the better, and being free from any Fever, he was ordered into the cold Bath; the two firſt Days he found himſelf more lively and briſk; but the third Day was chilly and cold after coming out of it, and therefore was deſired to leave it off; ſome Days after he became hectic, and I obſerved Pus in his Water, which he ſaid he had paſſed with his Urine for above three Months; after this he languiſhed for near a Month, and died upon the 25th of *Auguſt*. —Upon examining his Body next Day, we found the thoracic Viſcera in a ſound State, except that the Lungs adhered a little on the right Side. Both Kidneys were diſeaſed; they were inflamed, and ſeemed enlarged; and on cutting them, had Tubercles diſperſed every where through their Subſtance, which had come to Suppuration, and contained a good deal of Matter; the lower Part of the left Kidney was mortified, and contained two or three Ounces of a black fœtid Liquor. The Bladder of Urine was contracted, and its Coats greatly thickened, and the internal Coat much inflamed; and there was a Cyſt full of Matter, about Half the Size of a Walnut, between the muſcular and villous Coats, towards the lower Part of the right Side of the Bladder; and there were two large Cyſts, containing a ſmall Quantity of Matter, though capable of containing near two Ounces each; one ſituated between the *veſiculæ ſeminales* and Rectum, the other between the *veſiculæ* and Bladder, which opened into the Urethra by one common Orifice, capable of admitting a large Quill, at the Side of the *caput galinaginis*. The reſt of the Viſcera were in a ſound State.

dered to live on a cool Diet, and to drink the *decoctum Arabicum*, or an Infuſion of Linſeed,

Mary Hibbard, a Woman twenty-four Years of Age, was admitted into *St. George*'s Hoſpital, the 6th *June* 1759, for a Complaint of her Bladder. The Account ſhe gave of herſelf was, that, about *Chriſtmas* 1758, ſhe had parted with ſome Gravel; and about fourteen Days before coming to the Hoſpital, ſhe was ſeized with a violent Pain in her Back and Loins, attended with a Sickneſs and Nauſea; and very ſoon after complained of a violent Pain in the lower Part of her Belly, and with a perpetual Inclination to make Water, though ſhe felt a ſharp Pain and Difficulty in doing it; and that theſe Complaints ſtill remained. Her Pulſe was quick and ſtrong, and ſhe was inclined to be coſtive. She was immediately blooded, took the oily Draughts three Times a-Day, the *decoctum furfuris* for common Drink, and ſo much lenitive Electuary as procured her a Stool next Day. As there was a ſtrong Suſpicion of her having a Stone, ſhe was ſounded; but nothing at all was to be felt in the Bladder. Her Medicines eaſed her Pain in making Water, but not the Pain in her Back. On the 16th her Water was thick and turbid, and depoſited a brown Sediment; and the Difficulty in making Water ſtill remained; inſtead of the lenitive Electuary ſhe was ordered the Rhubarb oily Draught to be taken every Night. On the 18th, there being no Change in her Diſorder, ſhe had Draughts made of an Ounce and a Half of ſimple Mint-Water, Half a Drachm of the dulcified Spirit of Nitre, and five Drops of the *tinctura thebaica*, and Syrup three Times a-Day; but on the 22d ſhe complained, that ſince ſhe left off the oily Medicines, her Pain and Difficulty in making

ſeed, or ſuch other mild mucilaginous Liquors; and to take oily Medicines and Opiates occaſionally,

king Water had grown worſe; ſhe was therefore ordered the ſaline and oily Draughts alternately, and to take the Rhubarb oily Draught occaſionally when coſtive, which removed theſe Complaints; and they did not return while ſhe remained in the Houſe; but on the 4th of *July*, the Day before ſhe was to have been diſcharged as cured, ſhe was attacked with a ſharp Pain in her Hip and Loins, and about the *os coccygis*; which increaſed till the 9th, and extended itſelf all along the Outſide of the right Thigh; it was moſt acute about the *os coccygis*; but on examining, nothing was to be obſerved externally: This Pain continued more or leſs all that Month, and till the End of the next, and ſo obſtinate as not to be altered by bleeding, and the Uſe of Liniments, Bliſters, cooling Medicines, Opiates, warm Baths, and other Remedies. On the 20th of *Auguſt*, a ſtrengthening Plaiſter was applied to her Back, which gave immediate Relief, and ſhe was diſcharged cured the 29th. She continued well till *October*, when ſhe was attacked with a violent Fever at *Hounſlow*, and was brought to the Hoſpital on the 24th of that Month, and the tenth Day of the Fever. She died the 3d of *November*. During the Courſe of the Fever, ſhe only complained once of a Difficulty of making Water.—After Death I had her Body opened, when the only Thing particular which we could obſerve, was the urinary Bladder about four times the natural Size; it ſeemed to be flaccid, and in a State of Relaxation; the Kidneys were ſound, and no Signs of any Diſtemper could be obſerved about the Uterus or Rectum, or near the *os coccygis*.—When ſhe was

occaſionally, and gentle Laxatives, to keep the Body open; which Method of Treatment generally

firſt in the Hoſpital, I deſired her always to examine her Urine; but ſhe never obſerved that ſhe paſſed any Sand, Gravel, or any thing of that kind.

Thomae Facey, an elderly Man, was admitted into *St. George*'s Hoſpital the 14th of *March* 1759, for a Pain in his Back, and a Difficulty and Pain in making Water, which was often mixed with grumous Blood; but he had never obſerved any Sand or Gravel in it. His Pulſe was quick and full, attended with Heat and Thirſt; and he was inclined to be coſtive; he was at firſt blooded, and took a Doſe of laxative Mixture, and two Ounces of the Tincture of Roſes, four Times a Day, and the *decoctum malvæ* for common Drink. At firſt he ſeemed relieved, and paſſed no grumous Blood for ſome Days; but on the 26th, as he complained much of a Pain in making Water, the Tincture of Roſes was changed for the oily Draughts, and he was ordered the Rhubarb oily Draught occaſionally. On the 9th of *April* he fell ſuddenly into a comatoſe Way, and remained ſo till the 12th, when he died, notwithſtanding the Uſe of divers Remedies.—Upon examining his Body, both Kidneys were found in a ſound State; the Inteſtines covered with ſlight inflammatory Spots, the Bladder of Urine quite contracted, ſchirrhous, and greatly thickened; and its internal Surface rough and eroded, with one or two black Spots on it, and ſome grumous Blood lying on its Surface. The other viſcera were found.

In Ulcers of theſe Organs, the natural Balſams, mixed with ſoft Things, are often of great Service; of which the following

nerally gave Relief. Where the Patients were plethoric, or complained of Pain, or the Disorder

ing Case is an Example.——*William Lumley*, a Boy nine Years of Age, was admitted into *St. George*'s Hospital, the 6th of *September* 1759, for a Pain in the Bladder, and a Difficulty in making Water, which was always more or less mixed with Matter. At first there was a Suspicion of his having the Stone; but on sounding, none was to be found. From the Symptoms, it appeared as if there was an Ulcer in the Bladder near to its Neck; the Boy had a Cough, was very low, and inclined to be costive; at first he took three Spoonfuls of the Sperma Ceti Mixture four Times a-Day, and a Dose of Physic; but the Symptoms still remaining, on the 2d of *October* he was ordered to take a Scruple of the *electuarium e spermate ceti* three or four Times a Day, and to have the Gum-Arabic Decoction for his common Drink. By continuing the Use of these Things, and taking some opiate and laxative Medicines occasionally, he mended by slow Degrees, and all his Symptoms went off; and he recovered his Health and Strength, and returned Thanks for his Cure the 18th of *January* 1760.

The following Account of a remarkable Suppression of Urine I had in a Letter, dated the 25th of *November* 1757, from Mr. *Pearson*, one of the Surgeons to his Majesty's Military Hospitals, who then served as a Mate.

James Ruffendal, aged Twenty, of a delicate Habit, was, in the Middle of *July* last, seized with a violent Pain in both Kidneys, which extended along the Ureters to the Bladder, and remained in the same Situation for about three Weeks; during which Period his Urine began to decrease in Quantity, and the voiding

order was attended with a Fever, Bleeding was often neceſſary.

When

voiding of it was attended with acute Pain about the Neck of the Bladder. The Secretion then totally ſtopt; he remained for upwards of five Weeks in the Hoſpital at *Dorcheſter*, and made no Water; at the End of which Time I firſt viſited him along with Mr. *Adair*. He complained then of a ſlight Pain in his Kidneys, and told us he had a tolerable Appetite, ſweated little, and voided every Day four or five Liquid Stools. He was ordered Boluſes of Camphor, and *ſal. vol. c. cervi*, and every Night a Doſe of *tinctura cantharidum*; which he continued to take for a Fortnight without receiving the leaſt Benefit. I then blooded him to the Quantity of ten Ounces, and gave him an Emetic of ſix Drachms of the *vinum ipecacoanhæ*, and two Ounces of the Oxymel of Squills, which operated very well; and afterwards ordered him to take one of the following Boluſes every four Hours. *R.* Sapon. dur. Hiſpan. drachm. i. Sal. Abſynth. gr. vi. Calc. Viv. gr. x. Balſam. Peruv. q. s. ut fiat Bolus. Theſe he continued to take for twelve Days. On the Morning of the 14th of *October*, he was ſuddenly ſeized with an acute Pain in both Kidneys, and about Noon voided upwards of Half a Pint of ſtraw-coloured Urine, which let fall a clay-coloured Sediment. As he was feveriſh, I took away twelve Ounces of Blood, and ordered him Barley-Water with Nitre for Drink. He was eaſy in the Night, and made upwards of two Pints of Urine, which depoſited a Sediment of a gelatinous Conſiſtence. Next Morning the Pain increaſed, eſpecially in his Right Side, and ten Ounces more of Blood was taken away: This lowered the Pulſe, and conſiderably

abated

When the Stoppage of Urine ſeemed to ariſe from an Inflammation of the Kidneys or Bladder, or other Diſeaſes of theſe Parts, we

abated the Pain. Both this and the Blood taken away the Day before threw up an inflammatory Buff. He was ordered to continue the Uſe of the Barley Water with Nitre, and to take three Spoonfuls of a Mixture with *ſpiritus mindereri* every two Hours. He had an eaſy Night, and was next Day free from Fever; but complained of an Uneaſineſs in his Stomach and Nauſea. He was ordered a Scruple of the Powder of Ipecacoanha, which vomited him, and procured him a Stool. He was eaſy in the Night; but in the Morning was hot, and complained of a Pain in his Right Kidney, and all over his Bones, as he expreſſed it. I then gave him a Mixture, with *ſpiritus mindereri*, and the *pulvis contrayervа comp.* of which I deſired him to take ſome Spoonfuls frequently. This procured him a plentiful Sweat, which removed the Fever and Pain: theſe Symptoms returned next Day, but were removed by the ſame Means. I remained at *Dorcheſter* for a Week after, and he recovered his Strength and Appetite as much as could be expected in ſo ſhort a Time; but he ſtill complained of Pain in his Right Kidney, tho' he made Water freely. By a Letter I received from the Gentleman whoſe Care I left him under, I underſtood he had a Relapſe, which he has ſince got the better of.

I forgot to inform you, that his Father died of the ſame Complaints, after being ſix Months without ſecreting a Drop of Urine; and his Brother died of the ſame in about ten Weeks.

treated

treated it accordingly; and where the Fever was conſiderable, we made Evacuations, and gave plenty of diluting Liquors, and the cooling ſaline Medicines, and afterwards thoſe of the ſoft, mucilaginous, and oily Nature, and mild Diuretics and Opiates.

When the Diſorder, in its Progreſs, became chronical, the Sick were commonly ſent down to the fixed Hoſpital, ſo that we had no Opportunity of examining the Bodies of ſuch as might die of this Complaint.

OF

OF THE

EPILEPSY.

THE Epilepſy, or Falling Sickneſs, attacked a Number of Men, from the ſevere Duty of long Marches in hot Weather, and afterwards lying out on the cold Ground, expoſed to the Damps of the Night (*a*).

It was very ſeldom that Men were cured of this Diſorder in the military Hoſpitals. We had ſome few Inſtances, indeed, where Relief ſeemed to be obtained by Reſt, a regular

(*a*) I ſaw above twenty Men, while I was in *Germany*, who attributed the Epileptic Fits they were attacked with to theſe Cauſes, and ſaid they had never had the Epilepſy before; beſides others, who had been formerly ſubject to theſe Fits, who declared, that the Diſorder was brought back by the ſame Means.

Diet,

Diet, gentle Evacuations, and Iſſues (*b*); but even thoſe Men generally relapſed as ſoon as they

(*b*) *William Wilſon*, a Boy fourteen Years of Age, was admitted into *St. George*'s Hoſpital, *Sept.* 20, 1758, for Epileptic Fits, which he had been ſubject to for ſome Time, and which generally ſeized him three or four Times a Week. He took Variety of Medicines without any Effect till the 6th of *November*, when I ordered him to take eight Grains of the *pilulæ fœtidæ* Morning and Evening, and Phyſic twice a Week, and a Seton to be made in his Neck. After the Seton began to run, he had but three or four ſlight Fits in *November*, and none the following Month; and he was diſcharged the Hoſpital the 3d of *January* 1759, ſeemingly in good Health, with Directions to keep the Seton running at leaſt for ſome Months after he went home, and to come again to the Hoſpital if he ſhould have any Return of his Fits; but we never heard more of him.

Mary Hacket, a Girl of nineteen Years of Age, was admitted into *St. George*'s Hoſpital the 14th of *February* 1759, for Fits. The Account ſhe gave of her Caſe, was, that about five Years before ſhe was ſeized with the firſt Fit, after a Fright; three Years afterwards ſhe had a ſecond Fit, and for ſome Time after had a Fit commonly once a Month, about the Time of the full Moon; and ſince had them more frequently; that the Fits began with a Trembling and Shaking of the right Foot, and ſhe had frequent pricking Pains in the right Thigh, and what ſhe called convulſive Tremors in the right Leg and Foot. She was regular in her menſtrual Diſcharge. At the Time ſhe came into the Hoſpital, ſhe was feveriſh, and complained much of a ſharp Pain in the right Thigh: She was blooded, and took

ſome

they were ſent to their Regiments, and began to do Duty. All who had theſe Fits after being ſome Time with their Regiments, were at laſt diſcharged, and ſent home. However, before Men are diſcharged for Fits, they ſhould be watched very narrowly for ſome Time; for there is no Diſorder which Soldiers are more apt to counterfeit than this.

It is no Wonder that Soldiers, during the Time of Service, ſhould ſeldom be cured of theſe Fits; for in Adults it is not often cured

ſome cooling Medicine, and had no Fit till the 9th of *March*: She then took the fetid Pills and camphorated Julep twice a Day; but ſtill the Fits returned frequently. She then had the Bark, Valerian and Purging Doſes ſucceſſively, and uſed the warm Bath; but without any Effect. On the 7th of *May* a Bliſter was applied to her right Foot, which was intended to be kept open; but an Inflammation coming on that Leg and Foot, it was ſuffered to dry up, and an Iſſue made in the ſame Leg. From the Time the Bliſter was applied, ſhe had no Fit while ſhe remained in the Hoſpital. She was diſcharged the 15th of *July*, ſeemingly in good Health; though during that Period ſhe had ſome little Tremors in her Foot, and was ſubject to be low and faintiſh, which was always relieved by cordial anodyne Medicines. After going out of the Hoſpital, ſhe remained in good Health for ſeven or eight Months, when I was told her Diſeaſe had returned as violent as ever.

even

even in private Practice, with all the Conveniencies and Advantages to be wiſhed for; and generally the few that do get well, require a conſiderable Length of Time to accompliſh the Cure; and we find from daily Experience, as well as from examining the Records of Medicine, that the Cures that have been made, have moſtly been performed either by a Change of Air, ſuch as going from a cold to a hot Climate (*c*), by ſome remarkable Change of Life (*d*), or ſome accidental Diſorder;

(*c*) *Hippocrates* lays the chief Streſs of the Cure upon Change of Air, Aphor. 4, 5, ſect. ii. The Baron *Van Sweiten* ſays, he has known a great Number cured by going to the *Eaſt Indies*; many of whom have remained well ever after, while others had a Return of the Diſorder when they came back to *Holland*. *Comment.* vol. III. p. 436. ſect. 1080.

(*d*) *Celſus* has long ago obſerved, that the Appearance of the Menſes in Girls, and of Puberty in Boys, often removes this Diſorder, lib. iii. cap. xxiii.—On the 22d of *November* 1758, *Mary Evans*, a Girl of eighteen Years of Age, was admitted into *St. George*'s Hoſpital for Fits. She had never had the Menſtrua; but, for above two Years, found regularly, once a Month, a Fulneſs in her Breaſts, and had a ſlight Head Ach, and other Symptoms which generally precede this Diſcharge; and were ſucceeded with violent Epileptic Fits, which continued

der (*e*); or by Iſſues or Drains (*f*); or by the Removal of ſome acrid or irritating Subſtance,

ed returning frequently for two or three Days, and then went off; and ſhe had no more Symptoms of them, till about the ſame Time next Month. She was ordered to take ten Grains of the *pilulæ fætidæ* Morning and Evening, and a Doſe of Phyſic twice a Week; and as I found that ſhe became plethoric near the Time her Fits uſed to return, I began to imagine, that both the Fits and Stoppage of the Menſtrua were owing to too great a Fullneſs of the Veſſels, which prevented the Heart and vaſcular Syſtem from having ſuch free Play, as to drive the Blood through the extreme uterine Veſſels: I therefore ordered ſeven Ounces of Blood to be taken away from her immediately. In three Days Time the menſtrual Diſcharge began to make its Appearance; and on the 10th of *January* ſhe was diſcharged the Hoſpital, ſeemingly in good Health, after the menſtrual Diſcharge had returned for two regular Periods, without any Appearance of Epileptic Fits. She was deſired to come back to the Hoſpital, if the Fits returned; but I never heard more of her.

(*e*) *William Glen*, a Patient in the *Royal Infirmary* at *Edinburgh* in *September* 1747, was freed from Epileptic Fits, which uſed to return ten or twelve Times a Day, for a Quarter of a Year, by a Diarrhœa coming on; but they afterwards returned.

A Man ſubject to the Epilepſy was cured of it by a Quartan Ague, and had afterwards no Return of the Diſorder. *Miſcell. Curioſ. Dec.* 3. *Ann.* 3. p. 34.

(*f*) There are numerous Inſtances of the good Effects of Iſſues and Drains in diverſe Authors. *Tulpius, Van Sweiten, &c.*

or ſuch like (*g*); or by preventing the Cauſe (*h*); and that thoſe Medicines called Specifics have in general had but little Share in the Cure.

(*g*) *La Motte* gives one Inſtance of a Perſon being cured of the Epilepſy by voiding five Stones, *Chirurg.* vol. II. p. 20; and of another who died of the Fits from a triangular Stone remaining in the Kidneys, *ibid.* p. 416. Dr. *Short* cured a Woman of an Epilepſy of twelve Years ſtanding, by extirpating a cartilagenous Subſtance, about the Bigneſs of a large Pea, ſeated on the gaſtronemei Muſcles, above a Nerve which he cut aſunder. *Edin. Medic. Eſſays*, vol. IV. Art. 27.

(*h*) *Galen*, tells us, of his having prevented the Epileptic Fits in a Boy, who uſed to have one whenever he was hungry, by making him carry Bread in his Pocket, and eat a little as ſoon as he found the leaſt Symptoms of Hunger. *De Loc. Affect.* lib. v. cap. vi.——And *Van Sweiten* mentions how he cured a Boy, who had a Fit every full Moon; whoſe under Lip uſed to fall a Trembling before it began (a Symptom which, he ſays, often precedes Vomiting); by giving a Vomit every Month for ſix Months ſucceſſively, three Days before the full Moon and an Opiate in the Evening after its Operation; and by putting him under a Courſe of ſtrengthening Medicines. It was obſerveable, that if he vomited in the Time of the Paroxyſm it was ſoon at an End. See his *Comment.* vol. III. p. 439. ſect. 1050.

OF THE
SMALL-POX.

THE Small Pox appeared at *Paderborn* in the Spring 1761, and five had the diſtinct Kind, who recovered. Six or ſeven had them at *Oſnabruck* in *May* and *June*, and one Man and a Child died of the confluent Kind. Four had the diſtinct Kind at *Munſter* in *July* and *Auguſt*, who all did well. During the Winter, we had ſixteen in the Hoſpital I attended at *Bremen*; ten had the diſtinct Kind, and all recovered; five had the confluent Kind, of whom two died; as did alſo one who was brought to the Hoſpital with all the Symptoms of the moſt malignant Kind. Two were ſent to *Natzungen* in *July*, both ill of the confluent Kind; the one died two Hours after his Arri-

val; the other recovered: And we had only two in the Hoſpital at *Oſnabruck* in Winter 1762-63, and both did well.

There was nothing particular either in the Courſe or Treatment of this Diſorder, different from what we meet with in daily Practice; only as the Soldiers, who were attacked with it, were ſtrong, and in full Health, they required Bleeding and gentle Evacuations, and a cooling Regimen, on the firſt Appearance of the Symptoms.

The malignant Kind required the Uſe of Acids, and the Bark; which laſt, could often only be adminiſtered by Way of Clyſter, as the Sick could not ſwallow it: In ſhort, we treated the Patients much in the ſame Way as in the malignant Fever, Allowance only being made for the preſent Circumſtances.

Luckily this Diſorder never ſpread much in the Army, while I was in *Germany*.

OF

ERISYPILATOUS SWELLINGS.

IN *January* 1762, ſeveral Patients in the Hoſpitals I had the Care of at *Bremen*, had ſhining watery Swellings of the Face, or Extremities; which came ſuddenly, and were attended with a ſlight Degree of Inflammation, and watery Bliſters riſing above the Skin, and ſome Degree of Fever. The Bliſters were not ſmall, round, and angry, as in *St. Antony*'s Fire; but larger, and of an irregular Figure, reſembling thoſe raiſed when People are ſcalded by boiling Water. The Swellings did not pit on being preſſed, as the œdematous Swellings commonly do: They gave Pain when preſſed, but the Inflammation was not in that high Degree as it is in the common Phlegmon:

The Blood was fizy, and the Water of a high Colour. The Diſorder ſeemed to be a Species of the Eriſypelas.

Between the 9th and 12th of *January*, three Patients were ſeized with ſuch Swellings.

The firſt was a Dragoon, who had juſt recovered from a Flux, and a bad Cough. On the 9th, he was ſuddenly ſeized in the Night with a large Swelling of his Face, Hands, and Arms, which had a ſhining oedemetous Appearance, with a ſmall Degree of Redneſs, and was painful when preſſed; and he had two or three watery Bliſters roſe on the Back of each Hand above the Diviſion of the Fingers, attended with a quick full Pulſe, a feveriſh Heat and Thirſt, a Cough, and ſomewhat of a Difficulty of Breathing, and high-coloured Water; and he was inclined to be coſtive. He was immediately blooded, had a ſaline Mixture with Contrayerva and Nitre, and was ordered to take a Purge in the Morning. Next Day the Blood had thrown up an inflammatory Buff, the Fever was abated, and the Breathing eaſier; but the Cough and Swelling ſtill remained.

mained. He then took a Julep made of equal Parts of the Saline and Sperma Ceti Mixtures, which eaſed the Cough. The fourth Day the Pulſe was ſoft, and the Swellings ſtill in the ſame Situation, and the Breathing a little affected. A large Bliſter was applied to his Back, which diſcharged plentifully, relieved the Breathing, and leſſened the Swellings conſiderably. The Cough and ſome Degree of Swelling ſtill remained; but were removed by the Uſe of the Sperma Ceti Mixture with Oxymel, gentle Opiates, and ſome Doſes of Phyſic.

The ſecond was a Man of the Twentieth Regiment of Foot, who had been ſome Months in the Hoſpital for a hectic Complaint; he was taken ill, the ſame Night as the Dragoon, with a Swelling of his whole Face, particularly the Lips, which had a ſhining watery Appearance, and a ſlight Degree of Redneſs, attended with a ſtrong Fever; and was cured by Bleeding, Purging, the Uſe of the ſaline Medicines, and the Application of a Bliſter.

The third was an Invalid, who had been admitted for a pleuritic Complaint, which he had got the better of. He was attacked, the ſecond Night after the other two, with a ſhineing, watery, reddiſh Swelling, of his right Hand and Arm, up as far as the Joint of the Shoulder; four large watery Bladders likewiſe appeared on the fore Part of his Arm, above the Joint of the Elbow. Bleeding, with the cooling Medicines, and two Doſes of Salts, carried off the Fever, and leſſened the Swelling, in about ſeven Days Time; but a little of it, with a Stiffneſs, ſtill remained; which at laſt was removed by the Uſe of aromatic Fomentations, rubbing with the *linimentum ſaponaceum*, and taking two Doſes of Phyſic.

Within leſs than a Fortnight, five or ſix more were ſeized with Swellings of the ſame Kind on ſome of the Extremities, and all got well by nearly the ſame Treatment; excepting one Man, who was in a very low State, and had a large deep Ulcer on his Hip, where there had been a Mortification from his lying on that Part in a Fever. The Swelling at firſt

ſeemed

ſeemed to give Way; but on the third or fourth Day, having got a ſevere Cough, the Swelling increaſed, and the Inflammation began to look livid, and the Diſcharge from the Sore to look bad; and, notwithſtanding various Means were uſed, a Mortification of the Part came on, and he died the ſeventh Day.

OF

OF THE SCURVY.

THE true Scurvy, attended with ſpungy fetid Gums of a livid Colour, with livid Blotches, and Ulcers of the Legs, and other Symptoms, began to ſhew itſelf at *Bremen* in *January* 176[illegible]; tho we had not the leaſt Appearance of this Diſorder in the Hoſpitals at any other Place, while I was with the Troops in *Germany*.

A great Variety of Diſorders have been called by the Name of Scurvy: and the Diſeaſe has been divided into hot and cold; into the Acid, the Alcaline; and the Muriatic, according to the different Fancies of Authors, and the Cauſes they imagined it took its Riſe from; but, from later and more acurate Obſervations, Dr. *Lind* has

has juſtly remarked, that the true Scurvy has been found to be the ſame in all the different Parts of the Globe, and to take its Riſe from ſimilar Cauſes; from Cold and Moiſture, and living much upon ſalted Proviſions, joined to a Want of freſh Vegetables, and of good generous fermented Liquors; and hence it is moſt frequent in low marſhy Places in northern Climates, where there is a Scarcity of freſh Vegitables; and where the Inhabitants live much upon ſalted Proviſions in Winter; and aboard of Ships in long Voyages or Cruizes, eſpecially in the northern Seas; and hence this Diſorder was ſo frequent at *Quebec* the firſt Winter it was in our Poſſeſſion; and in ſome of the other Forts in *North America*, which were taken ſo late in the Year, that the Troops had not ſufficient Time to lay in a Stock of Vegetables, and of freſh Meat to be preſerved by the Froſt (*a*); but were obliged to live moſtly on Ship Proviſions.

It

(*a*) In *Quebec*, and other northern Parts of *North America*, as ſoon as the Froſt ſets in, they kill their Meat intended for their Winter

It is obſerved, both at Sea and Land, that where the Scurvy rages, thoſe People are leaſt ſubject to it who are well cloathed; who live in dry Habitations, or lie in dry Births; who take proper Exerciſe, without being too much expoſed to the Inclemency of the Weather; and who live well, and drink good Beer, Cyder, or Wine; as has been remarked by Dr. *Pringle*, Dr. *Lind*, and others.

At *Bremen* the Diſorder was only obſerved among the Soldiers; not one of the Gentlemen belonging to the Hoſpital, or to the Commiſſariate, nor one of the military Officers, not even of the Serjeants, having the leaſt Symptom of it. The Reaſon of its being frequent among the Soldiers was, that the Place is ſituated on a Plain naturally very damp; and the Soldiers were quartered in very low damp Houſes; at the ſame Time, no Vegetables or

Winter Store, and hang it up: It ſoon freezes, and will keep in this Manner all through the Winter. They preſerve Vegetables in the ſame Way; and when they intend to make Uſe of either, they put ſo much as they want into cold Water for ſome Time, which draws the Froſt out of it; and then they boil or roaſt it, as they think proper.

Greens

Greens were to be bought in the Market; and fresh Meat and other fresh Provisions, were at so high a Price, that the Soldiers could not afford to buy them; but were obliged to live on salted Meat, and salted Herrings, during the Winter; and what little Money they had remaining, they laid out on spirituous Liquors, which were sold cheap.

The Cure of this Disorder requires—living in a dry comfortable Place—good Cloathing—light Food of easy Digestion, such as good Bread, Panado, Milk, Whey, Broths made of fresh Meats—white Meats, with Greens, or other Vegetable, *&c.*—the Use of Liquors of the acid or acescent Kind, or the moderate Use of Beer, Cyder, good Wine, or weak Punch (*b*) —And, by Way of Medicine, gentle Purges, mild Diaphoretics; the free Use of acid or acescent Fruits, Lemons, Oranges, Apples, Pears,

(*b*) The free Use of raw Spirits is found to be very prejudicial; but a moderate Quantity of these Spirits, diluted with Water, and acidulated with Lemons or Oranges (or with Cream of Tartar, or Tamarinds, when the former cannot be got), and made into Punch, is found to be a good Antiscorbutic.

Currans,

Currans, Grapes, *&c.* and of the antiſcorbutic Plants and their Juices, as Succory, Endive, Water-Creſſes, Scurvy-Graſs (*c*), *&c.* on which a great Part of the Cure principally depends; and the Uſe of ſome of the ſtrengthening Bitters (*d*), of which the Bark is not the leaſt efficacious.

Bleeding is ſeldom requiſite, except where there is much Heat or Fever; or a ſharp Pain

(*c*) Moſt ripe Fruits, particularly Lemons and Oranges, and eſculent Herbs, and many Kinds of Roots, ſuch as Horſe-Radiſh, Onions, Leeks, and many others, have been found the moſt uſeful Remedies in the Cure of the Scurvy. Decoctions and Infuſions of Fir-Tops, of Spruce, and of other Species of the Pine-Tree; and Beer made of theſe Infuſions, by fermenting them with Molaſſes, are approved Antiſcorbutics: and when ſuch Remedies cannot be got, Infuſions of the common Bitters, and weak Punch, made with Tamarinds or Cream of Tartar, have proved ſerviceable; and where theſe Acids cannot be had, the Mineral Acids may be uſed for acidulating the Drink. However, it ought always to be remembered, that freſh Vegetables and Fruits, and vegitable Acids, produce much better Effects in the Scurvy, than any other Sorts of Remedies; and ought always to be uſed, when they can be got.

(*d*) Moſt of the common Bitters have been ſtrongly recommended in this Diſorder, Gentian, Trifoil, Wormwood, *&c.*— as likewiſe aromatic Bitters and Aromatics; ſuch as *calamus aromaticus*, Carvi Seeds, Winters Bark, Cinamon, and many others.

of

of the Side, or Difficulty of Breathing, or ſome Symptom of the like Kind; it is then ſometimes neceſſary to take away ſome Blood: And in obſtinate Caſes, it is often found of Uſe to promote Sweats, by making the Patient, while in Bed, drink freely of warm Whey, or Sack Whey, mixed with the ſcorbutic Juices; or warm Barley Water, or the like, mixed with a ſmall Quantity of the Antimonial Wine, or ſome other mild Diaphoretic.

And where the Patient is ſtrong, and there is no Danger of Hœmorrhagies, warm aromatic Baths have ſometimes been found ſerviceable; but they are not to be uſed where the Patient is weak.

The firſt Time I ſaw this Diſorder at *Bremen*, was in an old Invalid, *James Long*, who had come from *Briſtol* to *Emden*, and from thence to *Bremen*. He was ſome Weeks in the Hoſpital before I diſcovered his Diſorder to be the Scurvy. He at firſt complained only of great Weakneſs, and ſuch a Giddineſs, when he got out of Bed, that he could not walk, and of what he called flying rheumatic Pains of his

Legs.

Legs. He had no other visible Complaint; all which, I imagined, proceeded from Old-Age, and being worn out in the Service. At last, on the 25th of *January*, he complained of his Gums being sore; and, on examining him, I found his Breath fetid, his Gums swelled, soft, and spungy, his Legs covered with scorbutic Blotches, and other Symptoms, which evidently proved his Disorder to be the true Scurvy.

Upon which, I ordered him a low Diet, with the Addition of Greens for Dinner, and a Quart of Lemonade, with a Gill of Brandy in it, *per* Day, for his common Drink; and, by Way of Medicine, a Decoction of the Bark, with the Elixir of Vitriol; and, at the same Time, ordered his Gums to be scarified, where they were most swelled and spungy; and to be washed frequently with an astringent Gargle; and to be rubbed now and then with burnt Alum (*e*). By these Means, in a Fortnight's Time

(*e*) Dr. *Lind*, who has wrote one of the best Treatises on this Disorder, and who had a great Deal of Practice himself, says, "When

Time, his Gums became firmer, and his ſcorbutic Symptoms decreaſed. During that Courſe he took cold, and had a Stitch in his Side, for which he was blooded. The Blood threw up a very thin Buff, which was not of a firm Conſiſtence (*f*); the Craſſamentum below was of a blackiſh

'When firſt the Patient complains of an Itching and a Spun-'gineſs of the Gums, with looſe Teeth, either a Tincture of 'the Bark in Brandy, or aluminous Medicines, will be found 'ſerviceable in putting a Stop to the Beginning Laxity of 'theſe Parts." When the Putrefaction increaſes, he recommends the Uſe of ſome of the mineral Acids. See his *Treatiſe on the Scurvy*, part ii. chap. v. p. 201.—*Van Swieten* ſays, he never found any Thing anſwer better than a Gargle made of four Ounces of Elder or Roſe Water, acidulated with a Drachm of the Spirit of Sea Salt; and where the Gums were very putrid and gangrened, he has been obliged to touch them ſlightly with the pure Acid Spirit, and ſome Hours after to have them waſhed with the Gargle juſt mentioned. Vide *Comment.* vol. III. p. 629, ſect. 1163.

If the Spunginеſs of the Gums ſprout out into a luxuriant Fungus, it is ſometimes requiſite to cut ſuch Funguſes away, and to waſh the Sores frequently with gentle aſtringent or acid Liquors.

Dr. *Huxham* obſerves, that, after the Diſeaſe has continued ſome Time, the Blood appears a mere Gore as it were, not ſeparating into Serum and Craſſamentum as uſual, but remaining an uniform half-coagulated Maſs, generally of a more livid or

a blackiſh Colour and of a looſe Texture, and the Serum in a large Proportion. By the 2d of *March* his Gums had recovered their natural Firmneſs and Texture, and the ſcorbutic Spots and Pains of the Legs were gone, and he had recovered his Strength; the only remaining Complaint was a little Swelling about the Ankles, for which he continued the ſame Courſe, and took a Doſe or two of Phyſic. By the 16th of *March* all theſe Symptoms were gone, and he was diſmiſſed the Hoſpital free from all Complaints. I ſaw him well the laſt Week in *May*; and he told me, he had had no ſcorbutic Symptom ſince he left the Hoſpital.

darker Colour than common; though ſometimes it continues long very florid; but it always putrifies ſoon. See his *Eſſay on Fevers*, chap. v.

There is ſomething very particular in the Nature of this Diſorder, according to an Obſervation of Dr. *Lind*'s; who ſays, "That the Scurvy is a Diſeaſe in its Nature very oppo-"ſite to that of a Fever; inſomuch, that even an Infection "is long reſiſted by a ſcorbutic Habit; and thoſe of a ſcorbu-"tic Habit being ſeized with the Fever, was a Proof of its "proceeding entirely from Infection." See his *Firſt Paper on Fevers*, p. 4.

In

In the Beginning of *February*, another of the Invalids, who had been in the Hoſpital for a Fever and rheumatic Complaints, had Blotches appeared on his Legs, complained of great Weakneſs, and fainted away in attempting to walk; which made me ſuſpect his Diſorder to be the Scurvy; and, on examining him, I found his Gums ſoft and ſpongy, attended with the other Symptoms of the true Scurvy. I put him nearly on the ſame Courſe as in the laſt-mentioned Caſe: He uſed a low Diet, with the Addition of Greens for Dinner, which he eat with a little Butter and Vinegar; and he had a Quart of Lemonade, with two Ounces of Brandy, for his common Drink during the Day; and, by Way of Medicine, a Decoction of the Bark, with two Drachms of the *confectio cordiaca* to each Half Pint, which he took by Spoonfuls. Next Day he complained of a Pain in his Leg; and, on examining it more particularly, I found a large livid Blotch, yellow all round the Edges, on the fore Part, and a Tenſion all over that Leg. As he was ſo extremely low, as to be in Danger of

fainting whenever he ſat up, I was afraid leſt a Mortification ſhould enſue; and therefore ordered his Leg to be bathed Morning and Evening with a warm aromatic Fomentation, and a Poultice of Theriaca to be applied after it; and deſired him to take as much of the Decoction of the Bark with the Cordial as poſſible; and allowed him a Glaſs of Mountain Wine every two or three Hours. By the Continuance of this Courſe for ſome Weeks, the livid Blotches, Pain, and Stiffneſs of his Leg, and moſt of the other ſcorbutic Symptoms, went away; his Gums were reſtored to their natural Firmneſs; and he recovered his Strength ſo much as to be able to ſit up all Day long; though he ſtill remained very weak when he was ſent to *England*, in *March*.

In *February* and *March*, ſeven or eight more ſcorbutic Patients were ſent to the Hoſpital I attended, who were all treated in the ſame Manner; and all did well. About the Middle of *February* this Diſtemper began to ſhew itſelf in the other Hoſpital attended by Dr. *Miller*, who

who treated the Patients nearly in the ſame Way, and they all recovered.

On the 5th of *April*, a young Man, belonging to the Eighth Regiment of Foot, came to the Hoſpital with all the Symptoms of the true Scurvy; his Gums were ſpungy and fœtid; he had livid Blotches on his Legs, and Contractions of the Hams, and a Stiffneſs and Hardneſs in the Calves of both Legs (*g*). By following the ſame Courſe as the others, and the Uſe of frequent Fomentations, and rubbing the contracted Parts with ſoft Liniments, he mended daily; and, after taking a Doſe or two of Phyſic, was diſmiſſed perfectly recovered on the 10th of *May*. At his firſt Admiſſion into the Hoſpital, he was taken with a ſevere Cough,

(*g*) If the Swellings became large, ſtiff, and painful, Dr. *Lind* recommends that the Legs ſhould be frequently bathed and fomented; or, what he has found preferable, to be expoſed to their Steams, after being well covered with Blankets. After this Operation, he adviſes the Limb to be rubbed with ſome mild Oil, ſuch as *oleum palmæ*, or Salad Oil; and if the Swellings reſiſt both the general Cure and theſe Applications, the Limbs to be ſweated with Spirits. See his *Treatiſe on the Scurvy*, part ii. chap. v.

attended with Pain of the Breaſt, and a Spitting of Blood for a Day or two, for which he was blooded. His Blood threw up a little Buff; the Craſſamentum was of a blackiſh Colour and of a looſe Texture, with a good Proportion of a yellowiſh Serum. This Bleeding relieved the Complaints of his Breaſt, and he had no Return of them while he remained in the Hoſpital.

The firſt Week in *May* four Invalids were admitted into the Hoſpital for this Diſorder. The firſt had ſpungy Gums, a fœtid Breath, his Legs ſwelled and hard, and of a deep purple Colour. The ſecond was a Caſe at firſt of a more doubtful Kind; there were no ſpungy Gums, though an offenſive Breath; his Ancles and Feet were ſwelled, attended with Pain and Uneaſineſs, and a great Weakneſs and Laſſitude; but no Fever, nor any livid Blotches. The Swelling of the Feet and Ancles ſeemed at firſt Sight rather gouty or rheumatic, than of the ſcorbutic Kind; but from the Man's Way of Life, and the Diſorder being ſo frequent, we diſcovered it to be the Scurvy. The third had a very

a very fœtid Breath and ſpungy Gums, livid Spots and fungous Ulcers (*h*) on his Legs, with Pains and Weakneſs all over. The fourth had alſo ſpungy Gums and a fœtid Breath, Pains of the Legs and Arms, livid Blotches on his Legs, great Hardneſs and Contraction of the right Ham, and a livid hard Swelling on the Outſide of the left Thigh, immediately above the Knee.

We treated them all four in the Method above-mentioned, adding a Meſs of Greens to

(*h*) "Ulcers on the Legs, or any other Part of the Body, "require pretty much the ſame Treatment, *viz.* very gentle "Compreſſion, in order to keep under the Fungus, and ſuch "antiſceptic Applications as have been recommended for pu-"trid Gums, *viz. mel roſat.* acidulated with *ſpiritus vitrioli*, "*ung. Ægiptiacum*, *&c.* but nothing will avail where the Pa-"tient cannot have Vegetables and Fruits." *Dr. Lind's Treatiſe on Scurvy*, part ii. chap. v. p. 204. And he recommends, if the Swellings and Ulcers of the Legs neither yield to the general Cure nor to the Methods here propoſed, that a ſlow and gentle Courſe of Mercury ſhould be tried, after the ſcorbutic Taint is a good deal removed, and the Gums are ſufficiently firm; and to give along with it a Decoction of the Woods, or of Sarſaparilla; but this Method ought not to be attempted till the Gums have acquired a proper Firmneſs. See *ibid.* part ii. chap. v.

Dinner, giving Lemonade for Drink, and the Bark, with Elixir of Vitriol, by Way of Medicine. The Parts that were hard and ſwelled, were fomented, and rubbed with ſoft Liniments, and Poultices were applied to the hard Swelling on the Outſide of the left Thigh; and the Ulcers of the Legs dreſſed with Digeſtives, and occaſionally waſhed with ſpirituous Tinctures, and touched with Eſcharotics. Before I left *Bremen*, the firſt Week in *June*, the firſt and ſecond Patients were perfectly recovered, and the third and fourth almoſt well. All of them had had the Diſorder ſome Months before they came to the Hoſpital.

OF THE ITCH.

THERE was no Diſorder ſo common in the military Hoſpitals as the Itch. It is of an infectious Nature, and now moſt commonly believed to be entirely owing to little Inſects lodged in the Skin, which many Authors affirm they have ſeen in the Puſtules by the Help of a Microſcope; and that the Diſorder is entirely communicated by Infection, and does not ariſe from any Fault in the Fluids or Solids.

It has been found by Experience, that internal Medicines have little or no Effect in removing this Diſorder; and that only external Remedies, which come immediately in contact with the Parts affected, are capable of making a Cure;

Cure; which has been brought as a farther Proof, that the Itch is owing to Animalcules or Inſects; as it is alledged, that no Remedies will cure the Diſtemper, but ſuch as are capable of killing them.

The Medicines, which are moſt commonly uſed for the Cure, are *Mercury*, *White Helebore*, and *Sulphur*.

Mercurial Frictions on the Part are often made uſe of, and ſometimes with Succeſs, though they are by no Means to be depended upon for a Cure; beſides that, they are liable to throw the Patients into a Salivation, as I have ſeen happen more than once; for which Reaſons I would never recommend this Method where the Patient labours under no other Diſorder which requires the Uſe of Mercury, and would confine it entirely to Caſes where Patients, having the Itch, labour, at the ſame Time, under the *Lues venerea*, and require the free Uſe of mercurial Frictions; under ſuch Circumſtances the mercurial Ointment may be as well rubbed on the Parts affected with the Itch as upon any other.

The

The Powder of the Root of *White Helebore*, made up into an Ointment with Hogs Lard, or a ſtrong Decoction of it in Water, rubbed on the Parts, will often cure the Itch; but it is a ſharp Medicine, and generally ſmarts, and ſometimes inflames the Parts on which it is rubbed; and therefore it is not ſo commonly uſed, as we know a much ſurer and milder Remedy. Though I have cured ſome People with the Helebore Lotion without any Inconvenience, who would not uſe the Sulphur on Account of its Smell.

Sulphur is the moſt certain and eaſy Cure for the Itch of any we know, and perhaps is more certain in the Cure of this Diſorder than almoſt any other Medicine in any other Diſorder whatever. We uſed it in Form of the Sulphur Ointment of the *London Diſpenſatory*, of which one, two, or more Drachms were rubbed in every Night, in Proportion to the Extent of the Parts affected. Theſe Unctions were continued from four or five to ten or twelve Nights, according to the Violence and Continuance of the Diſorder. Moſt were cured

in

in a few Days; others required a longer Time. As the ſulphureous Unctions tend to obſtruct the Perſpiration, we generally ordered a Purge to be given before rubbing the Sulphur Ointment, and in full Habits ſometimes ordered a little Blood to be taken away; and put them all under a low Diet. After the Diſorder ſeemed to be removed, they took another Doſe or two of Phyſic to carry off any Impurities that might have been thrown upon the Bowels, during the Uſe of the Sulphur Ointment. In inveterate Caſes, the Sulphur was given internally at the ſame Time that the Patient rubbed with the Ointment.

It is generally believed (though denied by ſome) that Sulphur, taken internally, enters the Blood; and its Steams are thrown off by the perſpiratory Veſſels, and aſſiſts more effectually to deſtroy the Inſects and their Ovula, which give Riſe to the Itch; but whether this Effect be true or not, I found it to anſwer another very good Purpoſe; which was to keep the Belly rather looſe, while the Patient uſed the Unction; and by this Way it carried off thoſe Humours,

Humours, which ought to have paſſed off by the Skin; and for that Reaſon, when it had not that Effect, we joined ſome Lenitive Electuary to it.

There is one Thing to be obſerved with regard to ſulphureous Unctions, which is, that we ought not to uſe them too ſoon with People recovering out of Fevers, or other Diſorders which bring them low; otherwiſe there will be Danger of bringing on a Relapſe, which I have often obſerved to happen in military Hoſpitals, where the Itch has appeared as the Patients were recovering from Fevers and other Diſorders, and the Unctions were uſed too ſoon: But whether theſe Relapſes were owing to the ſulphureous Unction's ſtopping up the Pores of the Skin, and obſtructing a free Perſpiration, or to the Patient's being more apt to take Cold while they uſed the Sulphur Ointment, than at any other Time, is what I cannot determine; but to me it ſeems moſt probable, that theſe Unctions rather obſtruct the Perſpiration; and that when they are uſed too ſoon with People recovering from Fevers, eſpecially

pecially thoſe of the putrid Kind, they prevent thoſe Particles from paſſing off by the Skin, which it was neceſſary ſhould be evacuated, in order to free the Body from the Seeds of the Fever, or other Diſorders the Patients laboured under. But however this be, Experience has ſhewn, that we ought not to attempt the Cure of the Itch, in Patients ſo circumſtanced, till their Strength be in a great Meaſure re-eſtabliſhed, otherwiſe there will be Danger of a Relapſe; and likewiſe, that Patients uſing Sulphur externally, ought to be particularly on their Guard againſt Cold.

This Obſervation of Peoples being ſo apt to relapſe after Fevers by the too early Uſe of ſulphureous Unction, is a ſtrong Proof of the Uſefulneſs of keeping the Body open during the Time of Rubbing and of Purging the Patient afterwards; as by theſe Means we may carry off by the Bowels thoſe Particles which could not paſs by the Skin; and I think, ſo far as I have been able to obſerve, thoſe People have been leſs ſubject to relapſe into Fevers where this Caution has been uſed, than where it has been neglected.

That

That Species of the Itch where it forms ſmall Ulcers or Puſtules in the Skin, is the worſt Kind, and moſt contagious, and ſeems to take its Riſe from the common Itch continuing long, and making its Way deeper into the Skin. The Cure is the ſame, only this requires more frequent Unctions, and thoſe to be continued longer, than before the Diſorder has taken ſuch deep Root.

It is no uncommon Thing to ſee the Itch appear again, ſome Weeks after it has ſeemingly been cured by the Uſe of ſulphureous Unctions; which moſt commonly happened to thoſe who were in too great a Hurry to get well, and left off the Uſe of the Unctions too ſoon. Such Returns of the Itch were generally cured by the Repetition of the ſame Treatment as before.

TABLE

TABLE of DIET.

The following is a Copy of the Table of Diet which was uſed in the Hoſpital all the Time I was with the Troops in *Germany*:

	Breakfaſt.	*Dinner.*	*Supper.*
Full Diet,	One Pint of Rice Gruel; made with two Ounces of Rice, one Spoonful of fine Flower, a little common Salt, and fine Sugar.	One Pound of Meat.	As Breakfaſt.
Middle Diet,	As above.	One Pint of Broth, Half a Pound of Meat.	As above.
Low Diet,	As above, or according to the Patient's Stomach or Indiſpoſition.	One Pint of Broth; or Half a Pint of Panado, with two Spoonfuls of Wine, and a Quarter of an Ounce of fine Sugar.	As Breakfaſt.

The daily Allowance of Bread was a Pound to thoſe on full and middle Diet, and Half a Pound to thoſe on low Diet, or a Pound, if ſo ordered by the Phyſician.

Thoſe on full and middle Diet were allowed daily three Pints of Barley or Rice Water; to each Pint of which were added two Spoonfuls of Brandy, and a Quarter of an Ounce of Lump Sugar. Small Beer was mentioned in the Diet Table; but this we could never have good; and therefore was not uſed.

Thoſe on low Diet were allowed Barley or Rice Water; to which ſome Wine or Brandy was occaſionally added, if ordered ſo by the Phyſician.

Beſides this, the Phyſician might order an additional Quantity of Wine, Brandy, or Milk, or Water Gruel, or any other Articles which he thought proper for the Sick under his Care, and which could be got eaſily.

PHAR-

PHARMACOPOEIA

IN USUM

Nosocomii Regii Militaris Britanici.

MDCCLXI.

PHARMACOPOEIA

IN USUM

Nosocomii Regii Militaris.

Ann. MDCCLXI.

AQUÆ SIMPLICES ET SPIRITUOSÆ.

AQUA Alexeteria.
—— Bacc. Juniperi.
———— Cinnamomi.
———— Menthæ vulgaris.
———— Menthæ piperitidis.
———— Nucis moschatæ.
———— Pulegii.
———— Rutæ.

Vel aliæ aquæ hujus generis præparari possint, terendo in mortario vitreo elaeosacchara præparata, cum oleis essentialibus, et sacchari albi 12la quantitate; et dein addendo aquæ

fontanæ vel ſpiritus vini tenuis quantitatem ſufficientem (*a*).

Aqua calcis ſimp. Ph. Lond.

Doſis a lib. i. ad lib. ij. in die.

Aqua Hordeata. Ph. Lond.

Utenda pro potu.

BOLUS.

Bolus anodynus aſtringens.

℞ Theriacæ andromachi, drachm. dimid. opii, gr. i. M. pro doſi ſemel vel bis die.

Bolus e rheo cum mercurio.

℞ Pulv. rhei, gr. xxv. calomel, gr. v. ſyrup ſacchari, q. s.

Bolus e calomel.

℞ Calomel gr. v. conſerv. roſar. ſcrup i. M.

(*a*) Such *Elaeoſacchara* (as they are called), made by rubbing the eſſential Oils with twelve Times the Quantity of Sugar, may at all Times be prepared at the fixed Hoſpital, and carried about with the flying Hoſpital, much more conveniently than the ſimple or compound Waters themſelves.

Bolus

Bolus mercurialis.

℞ Argenti vivi, gr. x. extingue in balſam copaivi, q. s. et adde conſerv. roſar. q. s.

Bolus e ſcordio cum rheo.

℞ Elect. e ſcordio, ſcrup. i. pulv. Rhei, gr. x. ſyrup, q. s. ut fiat bolus ſumendus ſemel, bis, terve die.

COLLYRIA.

Collyrium ſaturninum.

℞ Sacchari ſaturni, ſalis ammoniaci crudi ana gr. vi. ſolve in aq. fontanæ, unc. xij. adde pro re nata tinct. thebaicæ, drachm. i.

Collyrium vitriolicum.

℞ Vitrioli albi, drachm. ſs. ſolve in aq. fontanæ, lib. i.

Confectio cardiaca. Ph. Lond.

Conſerva cynoſbat. Ph. Lond.

Conſerva roſar. Ph. Lond.

DECOCTA.

Decoctum album. Ph. Lond. utendum pro potu.

Decoctum arabicum.

℞ Gum. aribici, unc. dimid. coque in aq. hordeatæ bullientis, lib. ij. ad ſolutionem Gummi. utend. pro potu.—addi poſſit pro re nata ſpirit. nitri dulcis, drachm. ij.

Dococtum corticis Peruviani.

℞ Cort. Peruv. craſs. pulv. unc. i. coque in aq. fontan, lib. iij. ad lib. ij. Colaturæ adde tinct. cort. Peruv, unc. i. ſpirit vini Gallici ſeſcunc. Doſis ab uncia i. ad unc. iv. bis ter, quaterve die.

Decoctum cort. cum ſerpentaria.

Fit addendo decocto cort. Peruv. ſub finem coctionis, rad. ſerpentariæ virgin. contus. unc. dimid. Doſis ab unc. i. ad unc. iij. ter quaterve die.

Decoct. commun. pro clyſter.

℞ Flor. vel herb. chamamel. unc. i. coque in aq. fontan, lib. i. ſs. ad lib. i. & cola.

De-

Decoctum ligni guaiaci.

℞ Ligni guaiaci ras. lib. ſs. aq. fontanæ bullientis, cong. ij. macera per noctem; mane coque ad congium. i. & cola; Capiat a lib. ſs. ad lib. ij. die.

Decoctum nitroſum.

℞ Coccinel. ſcrupul. i. coque in aq. fontan. lib. ijſs. ad lib. ij. & dein adde ſalis nitri, unc. i. ſacchar. albi ſeſcunc. Colaturæ addi poſſit pro re nata aq. alicujus ſpirit. unc. ij. Doſis ab unc. i. ad unc. iv. 4tis vel 6tis horis.

Decoctum pectorale.

℞ Fol. herb. malvæ, unc. ij. ſeminum lini, unc. dimid. coque in aq. fontan. lib. ivſs. ad lib. iv. addendo ſub finem coctionis rad glycyrrhiz ſeſcunc. vel mellis optimi, unc. i. Cola pro potu.—Adde pro re nata aceti, ſeſcunc.

Decoctum rad. ſarſaparillæ.

℞ Rad. ſarſaparillæ, unc. iij. coque in aq. fontan. lib. iij. ad lib. ij. adde ſub finem coctionis ligni ſaſafras, drachm. i. rad. glycyrrhizæ, drachm.

drachm. ij. Colaturæ capiat a lib. i. ad lib. ij. in die.—Adde pro re nata vini antimonialis, drachm. ij.

ELECTARIA.

Elect. aſtringens balſamicum.

℞ Specier. e ſcordio, pulv. e tragacanth comp. ana unc. i. tincturæ thebaicæ, drachm. ij. ſyrup ſacchari, q. s. ut fiat elect. Doſis ad molem N. M. bis, ter, quaterve in die.

Elect. corticis Peruviani.

℞ Pulv. cort. Peruv. unc. iv. ſyrup ſacchari, q. s. Doſis a ſcrup. i. ad drachm. unam, bis, ter, 4^r. 6^ties. vel decies die.

Elect. corticis anodynum.

℞ Elect. cort. Peruv. unc. i^nam. elect. e ſcordio unciam dimidiam, vel tinct. thebaicæ ſcrup. ij.

Elect. corticis aſtringens.

℞ Elect. cort. Peruv. ſemunc. pulv. rad. tormentil, lapidis cancror. pp^t. ſingulorum, drachm. i. ſyrup, q. s.

Elect.

Elect. cort. cum ſerpentaria.

℞ Elect. cort. Peruv. unc. i. pulv. rad. ſerpentar. virgin. cort. canel. alb. ana, drachm ij. ſyrup. q. s.

Elect. cort. cum ſale ammoniac.

℞ Elect. cort. Peruv. ſeſcunciam. ſal. ammon. crud. drachm. i.

Elect. e baccis lauri. Ph. Lond.

Elect. lenitiv. Ph. Lond.

Elect. lenitivum cum ſulphure.

℞ Elect. lenitiv. lib. ſs. flor. ſulphuris, unc. ij. Doſis, moles, N. M. vel ad ſemunc. pro re nata.

Elect. lenitivum compoſitum.

℞ Elect. lenitiv. lib. i. pulv. jalap. unc. i. ſal. nitri, drachm. ij. ſyrup. q. s. Doſis a drach. i. ad drach. iv. pro r. n.

Elect. lenitivum balſamicum.

℞ Elect. lenitiv. comp. unc. ij. balſ. copaiv. unc. i. gum guaiac. unc. ſs. M. Doſis, cochleare theæ, h. s. vel mane & veſperi.

Electuar.

Electuar. e ſcordio vel diaſcordium. Ph. Lond.

Elect. e ſpermat. ceti.

℞ Balſam Peruv. unc. im. miſce optime cum mucilag. gum arab. ſeſcunciam & adde ſpermat. ceti, conſerv. roſar. ana unc. xij. ſyrup ſacchar. q. s. doſis, a dimidiâ drachma bis die ad drachm. im. quater vel ſexties die.

Elect. ſtomachicum.

℞ Conſerv. cynoſbat. unc. iv pulv. rad. zinziber. drachm. ij. canell. alb. unc. i. rubigin. martis, drachm. ij. ſyrup. q. s. doſis a ſcrup. i. bis terve die ad ſemidrach. 4tis horis.

Elect. e ſcammon. Ph. Lond.

ELIXIR.

Elix aloes. Ph. Lond.

Elix. paregoricum. Ph. Lond.

Elix. vitrioli acid. Ph. Lond.

ENE-

ENEMATA.

Enema commune laxativ.

℞ Aq. fontan. calid. unc. xij. elect. lenitiv. ſemunc. ſal. cathartici amari, unc. i. M.

Enema commun. oleos.

℞ Aq. fontan. bullient. unc. x. mucilag. gum arabic. unc. im. olei olivar. unc. ij. adde pro re nata elect. e ſcord. drachm. ij. vel. tinct. thebaic, drachm. i.

Enema ex amylo.

℞ Aq. fontan. calid. unc. iv. gelatin. amyli, unc. v. elect. e ſcord. drachm. i. M.

Enema terebinth.

℞ Terebinth commun. drachm. vi. ſolve in vitello ovi & adde enemat. oleos. unc. x.

Emplaſtrum veſicatorium. Ph. Lond.

FOTUS.

Fotus communis.

℞ Fol. malv. flor. chamamel. ſingulorum, m. i. coque in aq. fontan. q. s.

Fotus

Fotus commun. ſpirit.

℞ Fotus commun. lib. ij. aceti, lib. i. ſpirit. vini tenuis, lib. ſs. M. pro fotu.

Fotus cum ſale ammoniac.

℞ Fotus commun. lib. ij. ſal ammoniac crud. unc. i.

Fotus volatilis.

℞ Fotus commun. q. s. aſperge panno ſtatim ante applicationem ſpiritus ſal. ammoniac, q. s.

GARGARISMATA.

Gargariſma commune.

℞ Aq. hordeat. unc. xij. ſal. nitri, drachm. i. mellis ſemunc. M. adde pro re nata ſpirit. vin. unciam i.

Gargariſma acidum.

℞ Aq. hordeat. unc. xij. ſpirit. vini gallici, unc. i. aceti ſeſcunc. tinct. myrrhæ, drachm. ij. M.

Gargariſma volatile.

℞ Aq. hordeat. unc. xij. ſpirit. vin gallic. unc. ij. ſal. vol. ammoniaci, drachm. i. M.

GUT-

GUTTÆ ANTIMONIALES ANODYNÆ.

℞ Vini antimonialis, unc. im. tinct. thebaic. drachm. ij. dosis a gutt. 30 ad 40 bis terve die, vel a gutt. 60 ad 140, h. s. in potu tepido.

HAUSTUS.

Haustus simplex.

℞ Aq. fontan. sescunc. spirit. vini gallici drachm. i. ss. sacchar alb. drachm. dimidiam M.—Haustus præparari possit aqua aliqua simp. et spirit. loco aq. fontan. & spirit. vini gallici pro re nata.

Haustus anodynus.

℞ Haust. simp. sescunc. tinct. thebaic. gutt. xx. M.

Haustus camphoratus.

℞ Camphoræ, gr. iij. tere in mortario cum sacchar. alb. drach. dimid. & dein adde mucilag. gum arabici, drachm. ij. haust. simp. sescunciam. M. s. a. Dosis repetenda, 4ta. vel 6ta. quaque hora.

Haust.

Hauſt. emetic. antimonialis.

℞ Vini antimonialis ſemunciam. Dari poſſit ad drachm. x. pro r. n.

Hauſt. emeticus ſcilliticus.

℞ Oxymel. ſcillit. drachm. x. aq. fontan. ſemunc. pulv. rad. ipecacoan. gr. vi.

Hauſtus cardiacus.

℞ Hauſt. ſimp. ſeſcunciam confect. cardiac. ſcrup. im. M. f. hauſtus repetendus 4^tis. vel 6^tis. horis—adde pro re nata ſp. lavend. comp. dr. i.

Hauſtus cardiacus oleoſus.

℞ Ol. eſſential. menth. gutt. ij. tere in mortario vitreo cum ſacchar. alb. drachm. dimid. & adde hauſt. ſimplicis ſeſcunc. tinct. ſtomachic. drachm. i. M.—adde pro re nata tinctur. thebaic. gutt. x.

Hauſtus lixivioſus anodynus.

℞ Hauſt. ſimp. ſeſcunciam, lixivii tartari, drachmam dimidiam tincturæ thebaicæ, gutt. xx. cap. h. s. vel mane & veſperi.

Hauſtus e mithridatio.

℞ Hauſt. ſimp. ſeſcunc. mithridat. ſcrup. i. aceti vin. drachm. iij. doſis repetenda 4^tis^. vel. 6^tis^. horis.

Hauſtus oleoſus communis.

℞ Mucilagin. gum arabici, drachm. iv. ol. olivar, drachm. v. miſce s. a. & adde hauſt. ſimp. ſeſcunciam. Repet. 4 . vel 6^tis^. horis.

Hauſtus oleoſus cum rheo.

℞ Hauſt. oleos. communis, unc. ij. tinct. rhei ſeſcunc. vel pulv. rhei, gr. xxv. tinct. thebaic gutt. xv. M. fiat hauſtus ſumendus vel h. s. vel primo mane.

Hauſtus purgans.

℞ Infuſ. ſenæ. unc. iij. ſal. glauber. drachm. iij. ſpirit. vin. gallici, drachm. ij. ſacchar. alb. drachm. dimid. capiat mane.

Hauſtus ſalinus communis.

℞ Aceti vinoſi vel ſucc. limonum ſemunciam, ſal. abſynth. ſcrup. i. vel ad ſaturationem, hauſt. ſimp. ſeſcunciam adde pro re nata pulv. contra-

yerv. comp. ſcrup. i. vel pulv. contrayerv. cum nitro, ſcrup. ij.—Hauſtus præparari poſſit cum ſalis diuretici drachma dimid. loco acidi & ſalis abſynthii. Doſis repetend. 3tis. 4tijs. vel 6tis. horis — Eodem modo fit hauſtus cum ſpirit. mindereri uncia dimidiâ.

Hauſt. ſalin. cum confect. cardiaca.

℞ Hauſt. ſalin. commun. unc. ij. confect. cardiac. ſcrup. i. M. repet. 4tis. vel 6tis. horis.

Hauſt. ſalin. cum mithridatio.

℞ Hauſt. ſalin. commun. unc. ij. mithridatii, ſcrup. i. M. ſumend. 4tis. vel 6tis. horis.

Hauſtus ſalin. cum rheo.

℞ Hauſt. ſalin. com. uncias ij. pulv. rhei, gr. xxv. M. capiat mane.

Hauſtus ſalin. cum phu.

℞ Hauſt. ſalin. commun. unc. ij. pulv. rad. valerian. ſylveſtris, ſcrup. ij. Doſis repetend. 2dis. 4tis. vel 6tis. horis.

Hauſt. ſalinus ſuccinatus.

℞ Hauſt. ſalin. commun. unc. ij. ſal ſuccini pulv

pulv. caſtorei ſingulorum, gr. x. H. repetend. 4tis. vel 6tis. horis.

Hauſt. ſalinus purg. oleoſus.

℞ Mannæ opt. ſemunc. olei olivar. drachm. vi. vitelli ovi q. s. tere in mortario, addendo paulatim ſal cathartici amari, unc. i. ſolutam in aq. fontan. calid. unc. iij. ſpirit. vini gallici vel aq. alicujus ſpirituoſæ, drachm. iij. M. s. a pro doſi matutino.

Hauſtus volatilis.

℞ Hauſt. ſimp. ſeſcunciam ſal. vol. c. cervi, gr. x. M. H. repet. 4tis. vel 6tis. horis.

INFUSA.

Infuſum amarum. Ph. Lond. Addi poſſit pro re nata in præparando ſpirit. vini tenuis, lib. ſs. ad lib. ij. infuſi. Doſis ab unc. ina. bis die ad unc. ij. ter. die.

Infuſum raphani ruſticani.

℞ Rad. raphani ruſticani, unc. ij. baccar. juniper, unc. inam, cort. canell. alb. drachm. ij.

aq. fontan. bullient, lib. iv. infunde per noctem leni calore. Colaturæ adde ſpirit. vini gallici unc. iv. Doſis ab. unc. i. bis terve die ad unc. iv. 6tis. horis.

Infuſum ſenæ commun. Ph. Lond.

JULEPUM E MOSCHO.

℞ Moſch. drachmam im. tere optime in mortario cum ſacchar. alb. drachm. iij. & adde mucilagin. gum arab. dr. iv. Hauſt. ſimp. unc. vi. Doſis unc. ij. 4tis. vel 6tis. horis.

LINCTUS.

℞ Conſerv. cynoſbat. unc. iv. ol. olivar. ſyrup. ſacchari vel mellis ana unc. ij. adde pro re nata ſpirit. vitrioli tenuis, drachm. iv. Doſis cochleare theæ urgente tuſſi.

LINIMENTA.

Liniment. ſaponaceum. Ph. Lond.

Lini-

Linimentum camphoratum.

℞ Olei olivar. unc. ij. camphoræ, drachm. ij. M.

Linimentum volatile. Ph, Lond.

Linimentum volatile commune.

℞ Olei olivar. unc. iij. ſpiritus ſalis ammoniaci, dr. vi. M.

MELLA.

Mel cum borace.

℞ Mellis optimi, unc. i. pulv. ſubtiliſſim. boracis, dr. i. M.

Mel Ægyptiacum. Ph. Lond.

Mel roſaceum. Ph. Lond.

MITHRIDATUM. Ph. Lond.

MIXTURÆ.

Mixtura acida communis.

℞ Hauſt. ſimp. unc. viij. ſpirit. vitrioli tenuis, ſcrup. ij. vel ad gratam aciditatem. Doſis ab. unc. ij. ad unc. iv. 4^tis. vel 6^tis. horis.

Mixtura ammoniaca.

℞ Gum ammoniaci, drachm. i. ſolve in hauſt. ſimp. unc. vi. Doſis ab. unc. i. ad unc. ij. bis terve in die.

Mixtura ammon. cum oxymel.

℞ Mixt. ammoniac, unc. vi. oxymel ſcillit. drachm. vi. Doſis a cochlear. i. ad unc. ii. ter. 4^rve. die.

Mixtura ammoniac. anodyna.

℞ Mixt. ammoniac. cum oxymel. unc. vi. tinct. thebaic. drachm. dimid. Doſis a cochlear. i. ad iv. 4^tis. vel 6^tis. horis.

Mixtura Campechenſis.

℞ Extract. ligni Campechenſis, drachm. iij. ſolve in hauſt. ſimplic. unc. vi. adde pro re nata tinct. thebaic. gutt. xxx. vel Philon. Londinen. drachm. i. Doſis ab. unc. i. ad unc. iij. bis, ter, 4^rve. die.

Mixtura fætida.

℞ G. aſafætid. drachm. i. ſolve in hauſt. ſimp. unc. vi. Doſis ab. unc. i. ad unc. iij. 4^r. die.

Mixtura

Mixtura fætida volatilis.

℞ Mixt. fætid. unc. vi. ſpirit. volat. ſal. ammon. drachm. i. Doſis ab. unc. i. ad unc. ij. bis, ter, 4^ive. die.

Mixtura fracaſtorii.

℞ Hauſt. ſimp. unc. viij. Elect. e ſcordio, drachm. iv. Doſis ab. unc. i. ad unc. ij. 4^tis. vel 6^tis. horis.

Mixtura japonica.

℞ Hauſt. ſimp. unc. vi. Tinct. japonic. unc. i. adde pro re nata tinct. thebaic. dr. i.

Mixtura laxativa.

℞ Elect. lenitiv. unc. i. Mannæ ſemunc. coque in aq. fontan. unc. xvi. ad unc. xij. Colaturæ adde ſal. cathartici amari. ſeſcunciam. ſpirit. vini gallici, unc. i. Doſis ab. unc. ij. ad unc. xij.

Mixtura purg. antimonial.

℞ Elect. lenitiv. ſeſcunc. mannæ ſemunc. coque in aq. fontan. unc. xx. ad unc. xvi. & dein ſolve tartar. emetici, gr. x. Colaturæ doſis ab. unc. i. ad unc. iv. omni hora vel omni

2da. vel 3tia, vel 4ta. hora, donec laxetur alvus.

Mixtura oleosa volatilis.

℞ Hauſt. ſimp. unc. vi. ol. olivar. unc. iij. ſpirit. volatil. ſalis ammoniaci drachmam 1nam. M. Doſis ab. unc. i. ad unc. iij. 3tiis, vel 4tis, horis.

Mixtura ſcillitica.

℞ Hauſt. ſimp. unc. vi. oxymel ſcillitic. drachm. vi. Doſis a drachm. iv. ad unc. ij. bis, ter, 4rve. die.

Mixtura e ſpermat. ceti.

℞ Spermat. ceti, drachm. ij. ſolve in vitello ovi & adde hauſt. ſimp. unc. vi. adde, ℥ pro re nata, tinct. thebaic. ſcrup. ij. Doſis ab. unc. i. ad unc. ij. 4tis. vel 6tis. horis.

Mixtura e ſpermat. ceti cum balſamo.

℞ Balſam. copaiv. drachm. ij. tere in mortario cum mucilag. gum arabici, drachm. iij. & dein adde mixtur. e ſpermat. ceti, unc. vi. Doſis ab. unc. i. ad unc. iij. 4tis. vel 6tis. horis.

MUCILAGO. G. ARABICI.

℞ G. arabici pulv. unc. iv. ſolve in aq. puræ bullient. unc. x.

Oxymel ſcillit. Ph. Lond.

Philonium Londinen. Ph. Lond.

PILULÆ.

Pilulæ fætidæ.

℞ Gum aſafætid. myrrh. ana drachm. i. ſapon. alb. hiſpan. drachm. ij. Tinct. fuliginis q. s. Doſis a gr. x. ad drachm. dimid. bis terve die.

Pilulæ guaiac.

℞ Sapon. albi hiſpanici ſemunc. gum guaiac. ſcrup. iv. ſyrup. q. s. Doſis a ſcrup. i. ad drachmam dimidiam bis terve die.

Pilulæ gummoſæ. Ph. Lond.

Pilulæ mercuriales.

℞ Argenti vivi ſemunc. extingue in balſam. copaiv. q. s. & adde pulv. glycyrrhiz. gum guaiac.

guaiac. ſingulorum, drachm. vi. ſyrup. q. s. ut fiat maſſa. Doſis a ſcrup. ſs. ad drachmam dimidiam ſemel vel bis die.

Pilulæ rufi. Ph. Lond.

Pilulæ ſaponaceæ. Ph. Lond.

Pilulæ ſaponaceæ cum rheo.

℞ Sapon. alb. hiſpanici, drachm. vi. pulv. rhei, drachm. ij. ſyrup. ſacchari q. s. Doſis a ſcrup. i. ad ſcrup. ij. bis terve die.

Pilulæ ſcilliticæ.

℞ Pulv. glycyrhiz. rad. ſcill. exſiccat ana drachm. dimid. rad. zinziber. drachm. i. ſapon. alb. hiſpan. drachm. ij. ſyrup. q. s. Doſis a gr. iv. ad. gr. xvi. bis terve die.

Pilulæ ſtomachicæ.

℞ Pulv. canell. alb. drachm. ij. extract. rad. gentian. dr. i. mucilag. gum arabici q. s. Doſis a ſcrup. i. ad drachmam dimid. bis die—adde pro re nata rubigin. martis drachmam dimid.

PUL-

PULVERES.

Pulvis aſtringens.

℞ Pulv. canell. alb. rad. tormentill. ſingulorum, drachm. i. M. Doſis a ſcrup. i. ad drachm. i.

Pulvis aluminoſus.

℞ Alumin. crud. terræ japonicæ ana partes æquales doſis a gr. viij. ad drachmam dimidiam.

Pulv. anodynus Doveri.

℞ Sal. nitri, tartari vitriolati ſingulorum, unc. iv. in crucibulum candens injice, agitetur donec deflagratio & ſcintillatio deſinat, & adde opii conciſi, unc. i. & in pulverem redige addendo rad. glycyrrhiz. ipecacoanhæ ſubtiliſſime pulver. ana, unc. i. & dein probe miſceantur omnia. Doſis a gr. x. ad ſcrup. ij. vel ad drachmam 1^nam.

Pulvis antimonialis.

℞ Pulv. e chel. cancror. drachm. x. tartari emetici, dr. i. M. fiat pulv. ſubtiliſſimus. Doſis a gr. iij. ad gr. x. 4^ta. vel 6^ta. quaque hora.

Pulvis

Pulvis cardiacus.

℞ Pulv. canell. alb. drachm. i. rad. zedoariæ, drachm. ij. rad. ſerpentar. drachm. i. M. doſis a ſcrup. i. ad drachm. i. 4tis. vel 6tis. horis.

Pulvis chamæmelinus.

℞ Pulv. flor. chamæmel. drachm iij. aluminis, g. myrrh. ana drachm. i. Doſis a ſcrup. i. ad ſcrup. ij.

Pulv. contrayerv. comp. Ph. Lond.

Pulv. contrayerv. cum nitro.

℞ Pulv. contrayerv. comp. unc. iv. ſalis nitri, drachm. i. M. Doſis a ſcrup. i. ad drachm. i. 4tis. vel 6tis. horis.

Pulvis emeticus.

℞ Pulv. ipecacoanhæ, ſcrup. i. tartar emetici, gr. ij. Doſis a gr. xi. ad gr. xxii.

Hiera picra. Ph. Lond.

Pulv. Ipecacuanhæ cum opio.

℞ Pulv. rad. ipecacoan. gr. x. opii, gr. ij. doſis a gr. iij. ad gr. xij.

Pulv.

Pulv. e jalapio.

℞ Pulv. rad. jalapii, drachm. vi. rad. zinzib. drachm. ij. Doſis a ſcrup. i. ad ſcrup. ij.

Pulv. jalapii cum nitro.

℞ Pulv. rad. jalap. drachm. iv. ſalis nitri drachm. im. Doſis a ſcrup. i. ad ſcrup. ij.

Magneſia alba.

Pulv. nitroſus.

℞ Pulv. e chel. cancror. drachm. iij. nitri, drachm. i. M. Doſis a ſcrup. i. ad ſcrup. ij. vel ad drachmam. i.

Pulv. nitroſus camphoratus.

℞ Pulv. nitros, ſcrup. ij. camphoræ, gr. v. M. Doſis a ſcrup. i. ad ſcrup. ij.

Pulv. nitroſus cum gum guaiac.

℞ Sal. nitri, drachm. ij. gum guaiac. drachm. dimid. Doſis a gr. v. ad drachm. dimid.

Pulv. plummeri.

℞ Calomel. ſulph. aurat antimonii ana dr. ij.

tere

tere in mortario ut fiat pulv. ſubtiliſſimus. Doſis a gr. ij. ad gr. x. vel ad ſcrup. im.

Pulvis ſtanni. Ph. Lond.

Pulv. e ſpermat. ceti cum nitro.

℞ Spermat. ceti, drachm. ij. ſacchar. albi ſal. nitri ana unc. i^{m}. Doſis a ſcrup. dimid. ad drachmam i.

Pulv. e tragacanth. Ph. Lond.

SALES ACIDI.

PRÆPARATIONES.

Acida mineralia:

Spir. vitrioli fortis		
——— tenuis	Spir. vitrioli dulcis	Æther.
Spiritus nitri	Spir. nitri dulcis	
Spir. ſalis marini	Spir. ſalis dulcis.	

Varietat. acid. vegit.:

- Acetum.
- Spiritus aceti vel acetum diſtillatum.
- Succus limonum.
- Chryſtalli tartari.

Acid. anomal.:

- Sal. ſuccini.
- Sal. ſedativus Hombergeri.

SALES

SALES ALCALINI.

Alcal. vegit.
- Sal. absynthii.
- Sal. tartari.

Alcal. min.
- Sal. alcali mineral. seu soda, seu natrum.

Alcal. vol.
- Sal. volatilis c. cervi.
- Sal. volatilis sal. ammoniaci.

SALES NEUTRI.

SALES NEUTRI, qui fiunt ex ALCALI et ACIDO.

Tartarus vitriol.	vegetab.	vitrioli.
Sal. glauberi	minerali	
Sal. am. vitrioli	volatili	
Sal. nit. com.	vegetab.	nitri.
Nit. cubicum	mineral.	
Sal. am. nitrosum	volatili.	
Sal. digest. sylvii	vegetabil.	Sal. marini.
— marin. com.	minerali	
— ammon. com.	volatili	

Varietates salis neutri comp. ex alcal. & acid. vegitab.

Sal. diureticus	vegetab.	aceti.	Vegetabil.
Tartar. tartar.	veget. tartari	chryst. tartar.	
Sal. citratus com.	veget. absynth.	succ. limonum.	
Sal. de seignette	minerali	chryst. tartar.	
Spir. mindereri.	volatili	acet. distillat.	

Hi omnes ſales neutri præparari poſſunt pro uſu medico admiſcendo Alcali & acidum ad ſaturationem; alii vero in cryſtallos redacti, s. a. commodius circumferuntur pro uſu militari; alii ut *ſal. citratus comm.* et *ſpiritus mindereri* facilius præparantur ad miſcendo alcali & acidum ad ſaturationem pro re nata (*b*).

Solutio mercurii corroſivi ſublimati.

℞ Mercur. corroſiv. ſublimat. gr. vi. ſpir. vini gallici, unc. xii. M. fiat ſolutio. Doſis a ſemunc ad unc. i. die.

Species aromaticæ. Ph. Lond.

——— e ſcordio. Ph. Lond.

Tartar. emetic. Ph. Lond.

Theriaca andromachi. Ph. Lond.

(*b*) This Table of neutral Salts is nearly the ſame as one I have ſeen, which was ſaid to be a Copy of that given yearly by Dr. *Cullen*, Profeſſor of Chymiſtry in the Univerſity of *Edinburgh*, to his Pupils; and as that publiſhed by Dr. *Vogel*, in his *Inſtitutiones Chymiæ*, ſect. 629. Theſe neutral Salts are likewiſe taken Notice of by *Macquer*, in his *Elemens de Chymie*, and other late chymical Authors.

TINC-

TINCTURÆ.

Tinctura amara.
——— corticis Puruv.
——— martis in ſp. ſal.
——— japonica.
——— melampodii.
——— myrrhæ.
——— ſacra.
——— ſaturnina.
——— ſerpentariæ.
——— thebaica.
} Pharm. Lond.

Tinctura rhei.

℞ Pulv. rad. rhei, unc. ij. ſemin. cardamom minor. decortic. ſemunc. vini alb. hiſp. lib. ij. ſp. vini gallici, unc. viij. digere ſine calore & cola. Doſis ab. unc. i. ad unc. iij.

Tinctura ſtomachica.

℞ Cort. canell. alb. ſemunc. cort. aurantior. unc. i. ſemin. cardam. minor. decort. drachm. ij. ſpirit. vini gallici lib. ij. digere ſine calore & cola. Doſis a ſemunc ad unc. i. bis terve die. —Adde pro re nata vin alb. hiſp. lib. i.

UNGUENTA.

Unguenta cærulea vel mercurial. Ph. Lond.
Unguentum sulphuratum. Ph. Lond.

VINA.

Vinum amarum.
——— antimoniale.
——— chalybeatum.
} Pharm. Lond.

VITRUM CERATUM ANTIMONII.

A M

AN ESSAY

ON THE MEANS of Preserving the Health of SOLDIERS on SERVICE.

AND

Conducting MILITARY HOSPITALS.

OF THE

Means of Preſerving the Health of Soldiers on Service.

THE Life of *Britiſh* Soldiers on Service, in Time of War, is ſo very different from what they lead in Time of Peace, as to ſubject them to many Inconveniences and Diſeaſes.

In Time of Peace, Soldiers are quartered either in Towns or Garriſons, where they are under the Eye of their Officers, who take Care that they keep themſelves clean, and provided with Neceſſaries; they lie either in private Houſes or in Barracks, where they have a good Bed, regular Meals of wholeſome Proviſions, and enjoy moſt of the other Neceſſaries of

Life in common with the lower Claſs of People, their Duty is eaſy, they mount Guard but ſeldom, and in other Nights enjoy an undiſturbed Reſt.

Whereas, during the Time of an active Campaign, they are ſeldom in Houſes; they lie in Tents upon the Ground, which is often bare, and at beſt covered only with Straw and a Blanket; and ſometimes they are obliged, after fatiguing Marches in wet Weather, to lie on the bare Ground, without even a Tent to cover them; they muſt ſtand Centinel, and be upon Pikets and other Out-Poſts in the Night, during all Kinds of Weather; beſides performing long fatiguing Marches, and other military Duties; and when near an Enemy, they are perhaps on Duty every ſecond or third Night, beſides working Parties, and other Duties of Fatigue; and what Reſt they have is interrupted by frequent Alarms. They have often but little Time or Convenience to make themſelves clean. Proviſions are ſometimes ſcarce, and frequently on long Marches they have no Opportunity of dreſſing what they can get:

Water

Water is ſometimes difficult to be come at, and what is to be got, is bad. And it frequently happens, that neither Beer, Wine, nor Spirits, can be purchaſed for Money. In fixed Camps, they are often expoſed to the putrid Effluvia of dead Bodies, of dead Horſes, and other Animals, and of the Privies and Dung of the Horſes (*a*); and, in ſome Encampments, likewiſe to the unwholeſome Vapours of marſhy Ground, and of corrupt ſtagnating Water: All which, joined to the other Hardſhips and Inconveniences unavoidably attending a military Life in Time of Service, often give Riſe to numerous Diſeaſes, which weaken an Army in a moſt ſurpriſing Manner; and therefore Commanders ought to uſe every Means in their

(*a*) In the Year 1760, the Men, who remained in the fixed Camp about *Warbourg*, were very unhealthy; while the Regiments who were detached to the *Lower Rhine*, under the Command of the Hereditary Prince of *Brunſwick*, enjoyed a much better State of Health; and notwithſtanding their great Fatigues, and the Loſs they ſuſtained at the Affair of *Kampen*, were much ſtronger when they rejoined the Army to go upon the Winter Expedition into the Country of *Heſſe*, than thoſe Regiments which had remained in the fixed Camp.

Power, conſiſtent with the neceſſary military Operations, to preſerve the Health of the Soldiers.

Diſeaſes are more or leſs frequent in Armies according as the Seaſon is hot or cold, wet or dry; according to the Nature of the Climate, and the Time of the Year in which military Operations are carried on; the Nature of the Ground on which the Army is encamped, or the Situation of the Towns or Villages in which they are cantonned; the Cleanneſs, Neatneſs, and Dryneſs of the Camp, and of the Tents or Houſes in which the Soldiers are lodged; according as the Men are ſupplied with Proviſions, and good Water, good Beer, Wine, or other fermented Liquors; or are well cloathed, and well furniſhed with Straw and Blankets; in proportion as the Duty is more or leſs ſevere; and to the Care taken of ſuch as are attacked with Sickneſs.

Soldiers generally enjoy good Health in cold dry Weather, even during the Time of ſevere Froſt; if they be kept in Exerciſe, be well cloathed, and well ſupplied with Proviſions and good

good Liquors, and with Wood; as the Troops, both in *Germany* and *North America*, experienced during the late War; but Cold joined to Moiſture was obſerved always to be productive of Diſeaſes.

Nor is mere Heat of itſelf ſuch an Enemy to Health (*b*) as is generally apprehended; but when joined to Moiſture, is obſerved to give Riſe to the moſt fatal Diſorders in the warm Climates.

In our northern Climates the Winters are cold, and the Weather variable; ſometimes it is cold and rainy, at other Times thick and foggy; ſometimes we have fair Weather and Sunſhine, at other Times Froſt and Snow; and ſometimes it happens that we have all theſe different Sorts of Weather in the ſame Day. During this Seaſon, Soldiers are ſubject to Coughs, Pleuriſies, Peripneumonies, Rheumatiſms, and other Diſorders of the inflammatory

(*b*) This Dr. *Pringle* takes Notice of; and Mr. *Naeſmith* ſays, he obſerved it in Voyages to the *Eaſt Indies*, which afford the faireſt Trials of this Kind. See Dr. *Lind's Eſſay on the Means of Preſerving the Health of Seamen*, 2d edit. note to page 5.

Kind.

Kind. And in very intenſe Froſt, they are liable to have their Limbs benumbed with Cold, and their Extremities Froſt bit (as it is called).

And where there is a Want of freſh Proviſions, and they are obliged to live on ſalted Meat, and cannot have Greens, Pot Herbs, Roots, or other freſh Vegetables, nor be properly ſupplied with Beer, Cyder, Wine, or other generous fermented Liquors, they, as well as Sailors, are ſubject to the Scurvy (*c*); eſpecially if they be encamped or quartered in low damp Places.

The beſt Means of guarding againſt inflammatory Diſorders, and other Miſchiefs ariſing from Cold, whether in Camp or in Quarters, is, to take Care that the Soldiers be well cloathed; that they lie dry, and be well provided with Straw and Blankets, and with Wood; and to prevent, as much as poſſible,

(*c*) Dr. *Joh. Valint. Willius*, Army Phyſician to the King of *Denmark*, in his Treatiſe on Camp Diſeaſes, ſays, you ſcarce find a Camp in theſe northern Countries in which the true Scurvy, attended with ſtinking Breath and eroded Gums, is not to be obſerved. *Cap.* iii. *ſect.* iii.

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their expoſing themſelves to ſudden changes from Heat to Cold.

In theſe northern Climates, it would be right to allow every Soldier on Service a Flannel Waiſtcoat, a Pair of worſted Gloves, and a warm woollen Stock, or a Neckcloth, to wear when on Duty in cold and wet Weather, as ſoon as the Winter begins to ſet in (*d*). Dr. *Pringle* mentions the Advantage the Troops received

(*d*) A Flannel Waiſtcoat, worſted Gloves, and woollen Stock, or a Neckcloth, may be purchaſed for about Half a Crown *per* Man, and would contribute to preſerve the Lives of many; the recruiting of others, to ſupply whoſe Places, if they die, will coſt the Government a great deal more than the Price of the Articles mentioned; which for a Regiment of nine hundred Men, at the Rate of two Shillings and Six-Pence *per* Man, comes only to 112 *l.* 10 *s. per Ann.* Every Recruit ſent from *England* to the Army in *Germany*, coſt the Government at leaſt twenty Guineas before he joined his Regiment; and every ſick Man ſent to the general Hoſpital, coſt the Government at leaſt ſixteen Pence *per* Day, which is ten Pence above his Pay; ſo that, if we ſuppoſe the extraordinary Cloathing here mentioned would preſerve only the Lives of nine Men to each Regiment yearly, and keep forty in Health who would otherwiſe be ſick, we ſee what great Gainers the Government will be in Point of Money at the Year's End; beſides preſerving the Lives and Health of ſo many Men.

from

from the Flannel Waiſtcoats ſupplied by the Quakers, in the Winter Campaign of 1745-6, in *Britain*; and thoſe Regiments who had them for their Men towards the End of the Campaigns in *Germany*, found that they contributed greatly to keep the Men in Health. Officers ought to take particular Care that the Men be well provided with good ſtrong Shoes and Stockings; and where the Troops remain late in the Field, if the Government allowed a Pair or two extraordinary of each to every Foot Soldier, it would be of great Uſe to the Service.

Blankets ought to be provided for each Tent, and thoſe carried along with the Regiment, ſo as to be always ready for the Men when they come to their Ground. During the late War in *Germany*, a Couple of Blankets were allowed for each Tent of the *Britiſh* Troops, and each Company carried their Blankets covered with an Oil Cloth on a Horſe; ſo that they were always up with the Regiments when they came to their Ground.

Each Regiment ought to be provided with a Number of Watch Coats ſufficient to ſerve the Centinels

Centinels who are to be on Camp Duty, or general Guards, in very cold and wet Weather. Some of the Regiments in *Germany* had ſuch Coats, and found great Service from them.

In Winter Quarters, Soldiers are apt to make the Rooms in which they ſit, and their Guard Rooms, as hot as poſſible; eſpecially in *Germany*, where the Inhabitants uſe cloſe Stoves, inſtead of open Fires; and continue in theſe warm Rooms till they are called out on Duty, when, by being expoſed to ſudden Cold, they are apt to be ſeized with Inflammations of the Breaſt; and therefore Officers ought to examine carefully the Quarters and Guard Rooms allotted for their Men, and chuſe them dry and comfortable, if poſſible (*e*); but never to allow

(*e*) Dr. *Pringle* has very juſtly obſerved, that upper Stories are preferable to Ground Floors; and that all uninhabited large damp Houſes ought to be rejected. *Obſervat. on Diſeaſes of the Army*, part ii. chap. iii. ſect. 2.

If Neceſſity obliges Officers to put up with ſuch Places for their Men, Care ought to be taken to clean them well, and to air and dry them by Means of Fires, before the Soldiers go into them; and to ſupply well the Men who are to lodge in them with Straw and Blankets, and with Wood or Turf.

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the Men to keep them as hot as Ovens, by Means of cloſe Stoves, or other ſuch Contrivances; but to depend more on good warm Cloathing, and dry Quarters, for guarding againſt Diſeaſes, than upon artificial Heat. Many of the Regiments in *Germany* made the People in whoſe Houſes their Men were quartered, take down their Stoves, and uſe only open Fires; when there was no Danger of the Soldiers making their Quarters too warm, as Wood was difficult to be got.

But although cloſe Stoves are prejudicial in ſmall Rooms, yet when a Town is much crowded, and Men are obliged to be lodged, in Winter, in large Barns or Churches, or other large open Places, the *German* Stoves may be uſed with great Advantage in airing and drying ſuch Places, and keeping them of a moderate Heat; eſpecially if there be a Place in them for an open Fire, or if they be of that Kind which the *Germans* call *wynd Stoves*, which have a Door opening into the Chamber where the People are lodged; or if there be broken Windows, or any other Opening by which

which a free Circulation of Air can be kept up in the Men's Apartments.

In Winter, when the Weather is very cold or wet, a Glaſs of Brandy, or of the ſpirituous Tincture of the Bark, given to the Men as they went upon Duty, eſpecially in the Night, has been found to be of great Uſe (*f*). Dr. *Pringle* has very juſtly obſerved, that the Times of ſtanding Centinel, and being upon Out-poſts, ought, if poſſible, to be ſhortened at ſuch Seaſons; and that Fires in the Rear of the Camp, for Men coming off Duty to warm and dry themſelves at, were found to be of great Service.

(*f*) Dr. *Pringle* has taken Notice, that it would be a right Meaſure to make an Allowance of Spirits to the Infantry on Service; which certainly would be of great Uſe, and ſave many Mens Lives; and might be done at a ſmall Expence to the Government, if properly managed; as it would only be requiſite to make ſuch an Allowance when the Troops are in the Field, and to ſuch Men as mount Guard in cold wet Weather, or at Nights in Garriſon Towns, during the Winter. If ever ſuch an Allowance be made, what Spirits are given to the Men ought to be mixed with five or ſix Times the Quantity of Water; except when Men are to ſtand Centinels, or to be upon Out-Poſts, in a froſty Seaſon, or in cold wet Weather; at which Time a ſmall Glaſs of pure Spirits may be given them in Preſence of the Officer or Serjeant of the Guard.

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In Spring, and the latter End of Autumn, the Days are ſometimes extremely hot, and the Nights cold and damp, and the Men expoſed to theſe ſudden Changes; at ſuch Times, the Men who go upon Duty in the Night, ought to put on their Flannel Waiſtcoats, and be warmer cloathed than in the Day; and uſe many of the Precautions practiſed in Winter for the Preſervation of their Health.

In *North America*, when the Men were in the Field in very hard froſty Weather, Fires were lighted at the Ends of the Tents, and Centinels ſet over them to prevent their doing Miſchief; and both in *Germany* and *North America*, when the Troops were in the Field without Tents, they cut down Wood and made large Fires, and the Soldiers lay down and ſlept round theſe Fires, with their Feet next to them; and Fires were lighted at all Out-poſts, where it could be done with Safety.

In *Germany*, when the Weather ſet in rainy or cold towards the End of the Campaigns, and the Army was in a fixed Poſition, his Serene Highneſs Prince *Ferdinand* conſtantly ordered the

the Army to Hutt; which was done either by thatching their Tents, or building Hurdles, or digging Pitts, and covering and thatching them over. The Officers either built Hutts with Fire Places, or had Chimnies built to their Tents.

If, notwithſtanding all Precautions, Men upon Out-poſts ſhould be benumbed with Cold, or Froſt bit, as ſoon as they are brought into Camp or Quarters, their Extremities ought to be rubbed with Snow, or put into cold Water (*g*); and afterwards well dried, and wrapt up in Blankets; and warm mild Liquors given

(*g*) *Hildanus* relates a very remarkable Inſtance of the good Effects of this Treatment. A Man was found quite ſtiff and frozen all over. He was put into cold Water, and immediately the icy Spicula were diſcharged from all Parts of his Body, ſo that he ſeemed covered with an icy Cruſt. He was then put into a warm Bed, and took a Cordial Draught, and a plentiful Sweat followed; after which he recovered with the Loſs of the laſt Joints of his Fingers and Toes. *De Gangræna*, cap. xiii. People who are benumbed with Cold in froſty Weather ought never to be brought immediately near a Fire; for that has been found either to cauſe immediate Death or Gangrenes of the Extremities; and even Apples and other Fruits which have been frozen, if brought immediately near a Fire, turn ſoft and rot; but if put into cold Water, throw out the icy Spicula, and recover, ſo as to be almoſt as good as before they were frozen.

them to drink, and afterwards Cordials; and, after ſome Time, they may be brought near the Fire, or put to Bed. Dr. *Lind* (*b*) mentions one Caution to be uſed when Men are found in this Condition; which is, not to give them immediately ſtrong ſpirituous Liquors, for that thoſe often prove inſtantaneouſly fatal; but to put them to Bed, and give warm Water Gruel, or ſome other mild diluting Liquor, to drink; after which, he ſays, a Glaſs of Spirits will prove leſs dangerous and more beneficial.

When Men are quartered or cantonned in Towns or Villages, whoſe Situation is low and damp, and where freſh Meat and Vegetables are ſcarce in Winter, and the Scurvy frequent among the lower Claſs of People; Commanding Officers, at the Approach of Winter, ought to uſe their Endeavours to provide a Store of Potatoes, Onions, Cabbages, ſour Crout; of pickled Cabbages, and other pickled Vegetables; of Apples and other Fruits, preſerved in different Forms, to be laid up, and ſold out to

(*b*) *Means of Preſerving the Health of Seamen*, 2d edition page 19.

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the Men at a cheap Rate during the Winter. They ſhould contract, if poſſible, with Butchers to furniſh the Men with freſh Meat (*i*), and endeavour to procure good ſmall Beer, or Cyder or Wine in the Wine or Cyder Countries; or Spirits to be mixed with Water, and a ſmall Proportion of Cream of Tartar or Vinegar; or ſome other wholeſome fermented Liquor for their Drink (*k*); and to put their Men into as dry comfortable Quarters as poſſible.

In Times of War, when Men are ſent upon Expeditions into warm Climates, great Care ought to be taken to embark ſuch only as are in good Health; particular Regard ought to be paid to thoſe who are picked up in the Streets, or have been taken out of the *Savoy*, or other

(*i*) The Regiments in *Germany* who kept their Butchers in Winter, and made Stoppages of the Mens Pay, and obliged them to take a certain Quantity of Meat daily, were much more healthy than thoſe who uſed no Precaution of this Kind.

(*k*) In Places where the Articles here mentioned are at too high a Price for a Soldier's Pay, a ſmall Allowance, from the Government, of ſuch Things would contribute much to the Preſervation of the Mens Health in unwholeſome Garriſons.

Jails. All dirty Rags from off ſuch People ought to be thrown away or burnt; and the Men, after being well waſhed, and new cloathed, ought to be kept for a Fortnight or three Weeks in ſome Garriſon Town, or with their Regiments, in open airy Places, that it may be aſcertained that they have no infectious Diſorder before they be put aboard the Tranſports.

All Ships allotted for Tranſports ought to be well aired and purified, and every Thing fitted up properly, before the Men are embarked. They ought to be provided with Ventilators, or Wind Sails, to make a free Circulation of Air through the Veſſel (*l*); and they ought never to be crowded; but full Room allowed for each Man, in Proportion to the Length of the Voyage (*m*).

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(*l*) See Dr. *Lind's Treatiſe on the Means of Preſerving t Health of Seamen in the Royal Navy*, where he takes Notice moſt of the Articles here mentioned with regard to Tranſpo Ships in treating of Ships of War.

(*m*) When Ships are too much crowded with Men, if th meet with a tedious Paſſage, and hot moiſt cloſe Weather, th are often attacked with Diſeaſes which prove very fatal. D

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In military Expeditions, Soldiers are put upon Ships Allowance; which, Dr. *Lind* very juſtly obſerves, ought not, in Voyages to the warm Climates, be made up ſo much of ſalted Beef and ſalted Pork (which always tend to the Putreſcent), as is the common Practice of the Navy; but that a greater Share of Biſcuit, Flour, Oatmeal, Goarts, Rice, and other Stores of that Kind, ought to be laid in; and a greater Proportion of them, and a Leſs of the ſalted Meat, diſtributed among the Men: And he is certainly in the Right, when he ſays, that a full Animal Diet, and tenacious Malt Liquors, are well adapted to the Conſtitution of our own, and of other northern Climates; and that Sailors who viſit the *Greenland* Seas, and are

Lind, talking of Ships of War, ſays it is a Miſtake deſtructive to the Men to crowd too many of them together in a ſouthern Voyage, or in a hot Climate; as the Ship will be found, before the End of the Voyage, in more Diſtreſs for Want of Men, than ſhe would have been, had ſhe at firſt carried out only her proper Compliment. An additional Number is made, in order to ſupply an expected Mortality; but they generally increaſe that Mortality to double or triple their own Number. *Ibid. note to p.* 48.

remarkable for a voracious Appetite, and a ſtrong Digeſtion of hard ſalted Meat, and the coarſeſt Fare, when ſent to the *Weſt Indies*, ſoon become ſenſible of a Decay of Appetite, and find a full groſs ſalted Diet pernicious to Health. "Inſtinct (he ſays) has taught the "Natives between the Tropics to live chiefly "on a Vegetable Diet, of Grains, Roots, "and ſubacid Fruits, with Plenty of diluting "Liquors (*n*)."

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(*n*) The following is the Diet eſtabliſhed for the Seamen of his Majeſty's Navy.

Every Man is allowed a Pound of Biſcuit, *Averdupoiz Weight*, and a Gallon of Beer, *Wine Meaſure*, *per* Day.

On *Sunday* and *Thurſday*, one Pound of Pork, and Half a Pint of Peas, *Wincheſter Meaſure*.

On *Monday*, *Wedneſday*, and *Friday*, one Pint of Oatmeal, two Ounces of Butter, and four Ounces of Cheeſe.

On *Tueſday* and *Saturday* two Pounds of Beef.

It is left to the Commanders of Squadrons to ſhorten the aforeſaid Allowance of Proviſions according to the Exigence of the Service, taking Care that the Men be punctually paid for the ſame. As it is thought for the Benefit of the Service to alter ſome of the foregoing Particulars of Proviſions in Ships employed on foreign Voyages, it is to be obſerved, that

A Pint of Wine, or Half a Pint of Rum, Arrack, or Brandy, hold Proportion to a Gallon of Beer.

Fou

A Store of Vegetables, ſuch as Muſtard Seed, Garlick, Onions, Potatoes, pickled Cabbages and other pickled Vegetables, ſour Crout and other Things of that Kind, which can be purchaſed at a cheap Rate, and preſerved for ſome Months, ought to be laid in; which may be mixed with the Soops prepared for the Men, or given them to eat along with their ſalted Proviſions.

A Quantity of Beer, Cyder, or Wine, ought to be put aboard, and a certain Allowance diſtributed to each Man daily. When, for Want of theſe, Men are reduced to an Allowance of Spirits, they ought to be mixed with ſeven or eight Times the Quantity of Water, or

Four Pounds of Flour, or three Pounds of the ſame with a Pound of Raiſins, Half a Pound of Currans, or Half a Pound of Beef Suet pickled, are equal to a four Pound Piece of Beef, or two Pound Piece of Pork with Peas.

Half a Pound of Rice is equal to a Pint of Oatmeal.

A Pint of Olive Oil is equal to a Pound of Butter, or two Pounds of *Cheſhire* Cheeſe.

And Two-thirds of a Pound of *Cheſhire* Cheeſe is equal to a Pound of *Suffolk*.

If Soldiers are ſent as Paſſengers on board of King's Ships, or on board of Tranſports, their Allowance is generally but Two-thirds of the above.

made into Punch, by the Mixture of Water and Moloſſes, and the Juice of Lemons, before they are given to the Men; and, if Lemons cannot be got, Cream of Tartar, or Vinegar, ought to ſupply their Place; and it ought to be a Duty of one of the military Officers on board to ſee the Punch made, and diſtributed among the Men daily.

It would be right, on all Expeditions into warm Climates, to ſend ſome Sloops of War, or other armed Veſſels, before the grand Fleet, to take up a Quantity of Wine that will keep, either at the *Madeira*, or other Wine Countries; and afterwards to go to any of our Settlements that are neareſt the Place of Deſtination, and to take in a Quantity of Limes, Lemons, Oranges, and other Fruits, and Vegetables which will keep for ſome little Time; and of Spirits, live Stock, and other Proviſions proper for the Army; and then to meet the Fleet at the general Rendezvous. When once a Landing is made good, theſe Veſſels, after having unloaded their Cargoes, may either be employed on other Services, or kept conſtantly going and coming for whatever Stores or Proviſions are wanted for the Army or Fleet.

A ſufficient

A ſufficient Quantity of Vinegar ought to be put on board of each Tranſport, both for the Men to eat with their Victuals, and likewiſe for fumigating and waſhing between Decks occaſionally. And a Quantity of Moloſſes, or coarſe brown Sugar, and of Lemons, or their inſpiſſated Juice, or Cream of Tartar, ought to be allowed for making the Punch, as well as for other Purpoſes.

If the Water become fœtid, the Quantity to be uſed in the Day ought to be ſweetened by Means of the Ventilator contrived by the ingenious Dr. *Hales* (*o*) for that Purpoſe.

The Men ought to be brought upon Deck, and Roll called two or three Times a Day; they ſhould be made to comb their Hair, and waſh their Hands and Face every Day, and to

(*o*) This Ventilator is no more than a long Tube, with a Tin Box, about ſix Inches wide and four high, with a Number of Holes at the Top, fixed at one End; and this Box is put down to the Bottom of the Water, and the Noſe of a Pair of Bellows fixed to the other End of the Tube, which is above the Water; by working the Bellows, freſh Air is driven through the whole Body of Water, the putrid Effluvia are evaporated and diſperſed, and the Water becomes ſweet in a very ſhort Time.

ſhift

ſhift themſelves ſometimes, if poſſible; and in every reſpect keep themſelves as clean as the Nature of the Service will admit; and proper Exerciſes ſhould be contrived, to keep them in Health.

All the Parts of the Ship ought to be kept very neat and clean; and the Hold, and all between Decks, ought to be ſcraped and ſwept daily; and every Morning, in fair Weather, ought likewiſe to be waſhed, and afterwards ſprinkled or waſhed with warm Vinegar, while the Men are upon Deck (*p*).

When the Weather will permit, Fires of dried Wood may be lighted in Iron Kettles between Decks, and Centinels ſet over them, and the Fires ſprinkled with Roſin or Bits of Rope dipt in Tar, or with ſome cheap Aromatic; and theſe Fires may be carried into all the Parts of the Ship that Safety will permit, in order to dry and purify the Air (*q*). After this

(*p*) This ought always to be done in the Morning, that all the Parts of the Ship may have Time to dry before the Men go to reſt in their Births at Night; but it ought never to be done after Sun-ſet.

(*q*) It has been propoſed, that the Air in Ships of War ſhould be

this Operation all the Ports and Hatchways ſhould be opened, and the Air in all the Parts of the Ship often renewed by working the Ventilators.

The Mens Hammocks and Beds ought to be brought up upon Deck in fair Weather, and well aired, and afterwards put in their Places, and Fires lighted below Decks.

When Troops, ſent on an Expedition into warm Climates, arrive at the Place of their Deſtination, particular Care ſhould be taken to guard them againſt the Diſeaſes peculiar to ſuch Climates, which are different from thoſe common to our more northern Latitudes.

Dr. *Lind* ſays, that People coming firſt from a cold into a hot Climate are apt to have plethoric Symptoms; a Pain of the Head, Giddineſs, a Senſe of Weight, and Fulneſs of the Breaſt, and a ſlight Inflammation of the *tunica conjunctiva*; and that ſome are apt to be ſeized with ardent Fevers and Diarrhœas. And all Practitioners have obſerved, that New-Comers

be purified in this Way both by Dr. *Lind* and by Monſ. *de Hamel de Monceau.*

into

into warm Climates are at firſt liable to Fevers tending to the Ardent, and are very ſubject to Fevers of the remitting and intermitting Kind, which are the Endemics of all warm Countries at certain Seaſons of the Year; and after ſome Time they are apt to fall into Fluxes, the Yellow Fever, and other Diſeaſes depending on a putreſcent State of the Juices. In military Expeditions theſe Diſorders are liable to be complicated with Fevers of the Malignant or Hoſpital Kind, if Care is not taken to prevent it. And nothing has been found to be more productive of Diſeaſes in thoſe warm Climates, than indulging freely in the Uſe of Spirits and other ſtrong fermented Liquors; expoſing one's ſelf to the Damps, eſpecially lying on the Ground after the Dews fall; and working hard, or uſing violent Exerciſe in the Heat of the Day.

The beſt Preſervatives againſt Diſeaſes in warm Climates have been found to be,—1. Temperance; a Diet of light and eaſy Digeſtion, compoſed more of vegetable than of animal Food; ſuch as a ſmall Portion of freſh Meat,

Meat, joined with a ſufficient Quantity of Vegetables; Rice, *Indian* Corn, and other Grains, and Roots of various Kinds, prepared in different Forms; well baked Bread; the moderate Uſe of ripe Fruits; and the free Uſe of mild cooling ſubacid Liquors, joined with a ſmall Proportion of vinous or ſpirituous Liquors; carefully avoiding the too liberal Uſe of Wine, Spirits, or other ſtrong fermented Liquors.—2. Great Care not to expoſe one's ſelf to the Damps of the Night, nor lie down to ſleep on the Graſs, or in woody moiſt Places, in the Day; and to avoid all violent Exerciſe in the Heat of the Sun.—3. Such Means as tend to ſupport the Spirits; for Chearfulneſs has been obſerved to contribute as much to the Preſervation of Health, as Fear and Dejection of Spirits to the Production of Diſeaſes.—4. Keeping the Body clean, and bathing frequently in the Sea, or in a River, in the Morning.

And therefore, in warm Climates, Officers ought to be particularly careful to keep their Men ſober and temperate; to procure them good Bread, and Plenty of Vegetables and freſh Meat,

Meat, if poſſible; and where no other but ſalted Meat can be got, to make them boil a ſmall Proportion of it in their Camp Kettles, along with Onions, Goarts, Rice, Carrots, Turnips, Greens, or any other wholeſome Roots or Herbs which the Country affords, or they can get, and of theſe to prepare a good wholeſome Soop for themſelves; and where there is Plenty of the ripe aceſcent Fruits, which are reckoned wholeſome, to diſtribute a moderate Quantity among the Soldiers daily, which will both help to preſerve their Health, and prevent them from privately ſtealing and eating large Quantities to the Prejudice of their Health.—To encourage their Men, and keep up their Spirits.

They ſhould alſo prevent, as much as poſſible, the too free Uſe of Wine, Spirits, or other ſtrong fermented Liquors; and in Wine Countries give every Man a daily Allowance of Wine, to be mixed with Water for his common Drink; and in Countries where nothing but Spirits can be got, make the Spirit be mixed with Water, or made into a very weak Punch, before it is given to the Men, as Lemons, Oranges,

Limes,

Limes, and other Fruits proper for this Purpoſe, are generally to be had in moſt warm Countries.

They ſhould be careful not to march their Men in the Heat of the Day, nor order them upon Duty where they muſt ſtand expoſed to the Dews and Damps of the Night, unleſs where the military Operations abſolutely require it.

They ſhould endeavour to make the Bottom of the Tents be covered with Straw, or dried Leaves of Trees, or dried Reeds, and with Blankets (*r*), for the Men to lie upon.

The Time of ſtanding Centinel, and being upon Out-poſts, if poſſible, ſhould be ſhort, where Men are expoſed to the ſcorching Heat of the Sun; and when Men are upon Out-poſts in the Night, it ſhould be recommended to them to lie down on the Ground as little as poſſible; and if they do it, to chuſe a dry

(*r*) A ſufficient Store of Blankets has often been neglected to be carried out in Expeditions into warm Climates; but Blankets are no-where more neceſſary, as it is very prejudicial to the Health of Soldiers to be obliged to lie down on the bare Ground; and Straw, dried Reeds, and other ſuch Things, are often difficult to be got in the warm Climates.

Place;

Place; and, where it can be done, to have it covered with Straw or a Blanket, and to have ſome light Covering to defend them from the Dews.

The Tents ſhould be covered with Boughs of Trees, and the Men ſhould be ordered ſometimes to ſtrike them in the Middle of the Day, and air well every Thing within them.

The Men ſhould be obliged to keep themſelves neat and clean; to comb their Hair, and change their Linen often; and if the Camp be near the Sea, or a large River, they ought to bathe themſelves as often as the Nature of the Service will permit. However the following Caution, mentioned by Dr. *Lind*, ought to be obſerved, which is, not to go into the cold Bath when overheated with Work or Liquor, or when the Stomach is full, or when a critical Eruption, called the prickly Heat, appears on the Skin (*s*).

When

(*s*) Dr. *Lind* ſays, the Uſe of the cold Bath, either in Tubs under the Forecaſtle, or to dip in the Sea early in the Morning, has been found extremely beneficial in warm Weather and hot Countries; and that he can affirm, from his own Experience in hot

When Men are ſeized with inflammatory Symptoms on entering into warm Climates, they may be blooded freely: Afterwards they do not eaſily bear ſuch copious Evacuations, but rather require to have them made in ſmaller Quantities, and very early and frequent, as Inflammations make a rapid Progreſs in warm Countries. Dr. *Lind* ſays, many Practitioners diſapprove of Blood-letting in the Countries lying under the Torrid Zone, on a Suppoſition that the Blood is too much diſſolved; but he thinks that this Rule will admit of many Exceptions; and that Sailors *(and conſequently Soldiers)*, being ſtrong and robuſt, and expoſed to greater Viciſſitudes of Heat and Cold, and more Exceſſes, and other Accidents in general, bear freer Bleeding than any other Set of People.

hot Climates, that many Diarrhœas and other Complaints, the pure and ſole Effect of an unuſual and great Heat (relaxing the Syſtem of the Solids, and occaſioning a Colliquation of the Animal Juices), have not only been cured by cold Bathing; but their Return, and even the Attack of ſuch Diſeaſes, effectually prevented by it. *Ibid.* p. 44, *&c.*

After ſome Time, the Diſeaſes in theſe warm Climates tend to the putrid Kind, and muſt be treated as ſuch.

In all Countries, and in all Climates, great Care ought to be taken in chuſing the Ground on which Men are to encamp. Dry high Grounds, expoſed to the Winds, where there is a free Current of Air, and which lie at a Diſtance from Marſhes, ſtagnating Water, and large Woods, are generally healthful in very different Climates (*t*). But Places ſituated low, where, on digging two or three Feet below the Surface of the Earth, you come to Water (*u*), and marſhy Grounds, and Places ſurrounded with corrupt ſtagnating Water, are almoſt always the contrary, and very unhealth-

(*t*) Mr. *du Hamel* ſays, that the Air of the Iſland of *St. Domingo* is very fatal to *Europeans*; but it is obſerved that thoſe People who inhabit the riſing Grounds are much leſs expoſed to Diſeaſes than thoſe who live in the Vallies. *Sur la ſanté des Equipages*, art. i. p. 16.

(*u*) Ground may ſeem very dry and healthful, and yet be quite the contrary, as Dr. *Pringle* remarks is the Caſe in the Neighbourhood of *Bois le Duc*, in *Flanders*, where Water is found every-where at the Depth of two or three Feet from the Surface.

ful;

ful; as are often thoſe Grounds which are ſubject to be overflowed by large Rivers, and low Places covered with Wood, where there is no free Circulation of Air. However, it ought to be obſerved, that it is not the Neighbourhood of Water alone which is prejudicial, but the watery Vapours which keep the Air perpetually moiſt, and the Exhalations of corrupt Effluvia, which render ſuch Places unwholeſome; for the Neighbourhood of Rivers, and of the Sea, where the Tide ebbs and flows freely, has no ſuch Effect, where the Situation is dry and airy; and thoſe very unhealthy marſhy Grounds often continue healthy in cold Weather, when their Waters are refreſhed with Rains (*w*), and little or no moiſt putrid Exhalations riſe from them; though, as Dr. *Pringle* obſerves, in Summer and Autumn, when their Waters begin to corrupt, and the Exhalation is ſtrong, they are always expoſed to Diſeaſes;

(*w*) Mr. *du Hamel* remarks, that Places which were formerly very ſubject to Diſeaſes have become healthful when the Water which ſurrounded them was refreſhed by opening a Communication with the Sea. *Ibid.* art. i. p. 18.

and it is for this Reaſon that ſuch Places are always very unhealthy in warm Climates.

Hence, where the military Operations will permit, Commanders, if poſſible, ought to chuſe a dry Ground, whoſe Situation is high, and which admits a free Current of Air, ſuch as on the Banks of Rivers, where there is generally a Stream of freſh Air, and Plenty of freſh Water to ſupply the Camp (*x*); taking Care to avoid the Neighbourhood of low marſhy Grounds, and corrupt ſtagnating Waters, eſpecially in Summer, and in hot Climates.

When Neceſſity obliges Commanders to take Poſt, or encamp in a wet or marſhy Ground, they ſhould endeavour to make it as dry as poſſible, by ordering Trenches to be cut for

(*x*) Dr. *Pringle* obſerves, that where Grounds are equally dry, that the Camps are always moſt healthful on the Banks of large Rivers; becauſe in the hot Seaſon Situations of this Kind have a Stream of freſh Air from the Water, tending to carry off both the moiſt and putrid Exhalations.—And in Cantonments we are not only to ſeek Villages removed from marſhy Grounds, but ſuch as are leaſt choaked with Plantations, and ſtand higheſt above ſubterraneous Water. See his *Obſervat. on Diſeaſes of the Army*, 3d edit. p. 99.

Drains

Drains acroſs the Field and round the Mens Tents; to ſee that the Ground within the Tents be well covered with Straw; to order the Tents to be ſtruck at Mid-Day, in dry warm Weather, and the Men to dry and air the Straw, and change it frequently; to have a proper Supply of Blankets for the Men, and to take Care that they be well cloathed, eſpecially thoſe who go upon Duty in the Nights; and, in the northern Climates, to have Fires in proper Places for warming the Men and drying their Cloaths, and for correcting the Dampneſs of the Air (*y*).

In Countries lying under the Torrid Zone, the Parts near the Sea Shore are often marſhy,

(*y*) The Negroes on the Coaſt of *Guinea*, and ſome of the *Indians*, both of whom ſleep on the Ground, have conſtantly a Fire producing a little Smoak burning in the Hutts where they ſleep, which corrects the Moiſture of the Night, and renders the Damp of the Earth leſs noxious; and during the Time of the very unwholeſome Fogs on the Coaſt of *Guinea*, called Harmattans, which lay waſte whole Negroe Towns, the Smoak of Wood, of pitched Staves, and ſuch Things, are found to be the beſt Correctors of this thick Air. See Dr. *Lind's Means of preſerving the Health of Seamen.*

or cloſe and covered with Wood, or have ſwampy Beaches, and are very unwholeſome; and therefore where Soldiers aboard of Tranſports keep their Health, Commanders ought to be very careful not to allow them to land, till they come to the Place of their Deſtination. Dr. *Lind* obſerves, that Men commonly live more healthy in warm Climates at Sea, where the Air is dry and ſerene, and the Heat moderated by refreſhing Breezes, than when they arrive in Harbours, or get within Reach of the noxious Vapours which ariſe from many Parts of the Land (*z*).

When Neceſſity requires Parties to be landed for Wood or Water, or on other Duties, they ſhould always be obliged to return and lie aboard at Night; and if that cannot be done, they ſhould be cautioned to avoid lying down to ſleep on the Graſs, where the Air is freſh, or they are expoſed to the Dews; and to pitch their Tents on a riſing

(*z*) Dr. *Lind* ſays, that it is conſtantly obſerved in unhealthy Harbours, that the Boats Crews employed in wooding and watering the Ships, who are obliged to lie on Shore, ſuffer moſt. *Ibid.* p. 72.

Ground,

Ground, covered with Straw or dried Reeds, and a Blanket; and to uſe the other Precautions neceſſary for encamping in theſe warm Climates; for where this Care has been neglected, the Conſequences have frequently proved fatal (*a*).

On unhealthful Coaſts, the noxious Land Vapours often affect the Crews of Ships that run up into Rivers or Harbours, and cauſe great Sickneſs; and therefore in ſuch Places Ships ſhould anchor at as great a Diſtance from the Shore as can well be done, that they may be expoſed to the Sea Breezes, and as much to

(*a*) A very remarkable Inſtance of this we have related by Dr. *Lind*. In the Year 1739, in *Mahon* Harbour, a Party of Men were ſent with the Coopers from Admiral *Haddock*'s Fleet to refit and fill the Water Caſks, who, finding an artificial Cave dug out of a ſoft ſandy Stone, put their bedding into it; every one who ſlept in this damp Place was infected with the Tertian Fever, then epidemic in *Minorca*, and not one in eight recovered. At the ſame Time the Men aboard the Ships continued healthy; and others, who were afterwards ſent on the ſame Duty, enjoyed perfect Health by being obliged to ſleep in their reſpective Ships. He ſays, he has known a whole Boat's Crew ſeized next Morning with bad Fevers by ſleeping near the Mangroves, with which the Sides of the Rivers are frequently planted in the Torrid Zone. *Ibid.* p. 74, 75.

the Windward of the Woods and Marſhes as poſſible; and if the Anchorage is ſafe, one ſhould prefer the open Sea to running up into Rivers or Creeks (*b*).

Cleanneſs and Neatneſs in the Camp is another Article that ought to be particularly regarded. *Portius*, *Ramazini*, and moſt other Authors who treat of Camp Diſeaſes, attribute thoſe of the putrid Kind in a great Meaſure to the Stench and putrid Effluvia ariſing from the Excrements of Men and Beaſts, and from the dead Bodies of Men, Horſes, and other Ani-

(*b*) The higher that Ships ſail up the Rivers upon the Coaſt of *Guinea*, the more ſickly they become: Such, however, as keep at Sea beyond the Reach of the Land Breezes (that is, two or three Leagues at Sea), are for the moſt part healthy. *Lind*, *ibid.* p. 65. The Malignity of theſe Land Vapours often does not extend itſelf to any conſiderable Diſtance, as we know by manifold Experience. The Troops in *Zealand* were very unhealthy when Admiral *Mitchel*'s Squadron, which lay but a little Way from the Shore, enjoyed perfect Health.—Dr. *Pringle's Obſervat. on the Diſeaſes of the Army*, p. 1. chap. vii.—In *July* and *Auguſt* 1744, two Ships, belonging to Admiral *Long*'s Squadron in the *Mediterranean*, lying near the Mouth of the River *Tyber*, began to be affected, while others, though at a very ſmall Diſtance, but further out at Sea, had not a Man ſick. *Lind*, *ibid.* p. 66.

mals,

mals, lying unburied in the Neighbourhood of Camps, and have in a particular Manner mentioned the Neceſſity of burying ſuch putrid Subſtances. Dr. *Pringle* has very juſtly recommended the Digging of Deep Pits for Privies in Camp, and covering the Excrements with Earth daily (*c*) till the Pits are near full, and then to fill them up with Earth, and dig new ones; and to puniſh every Perſon who ſhall eaſe himſelf any where in Camp but in the Privies: And he remarks, that when the Camp begins to turn unhealthy, that often the only Means that will preſerve the Health of the Men, is to change the Ground, and to leave behind all the Filth and Naſtineſs which gave Riſe to thoſe putrid Diſorders.

In fixed Camps, the ſtriking the Tents at

(*c*) The divine Lawgiver *Moſes* has enjoined Cleanlineſs in the Camp to the *Jews* in a particular Manner, when he ſays, "Thou ſhalt have a Place alſo without the Camp, whither "thou ſhalt go forth abroad; and thou ſhalt have a Paddle "upon thy Weapon, and it ſhall be when thou wilt eaſe thy-"ſelf abroad thou ſhalt dig therewith, and ſhalt turn back and "cover that which cometh from thee. For the Lord thy God "walketh in the Midſt of thy Camp; therefore ſhall thy "Camp be holy, that he ſee no unclean Thing in thee, and "turn away from thee." *Deuteronomy*, chap. xxiii. verſes 12, 13, 14.

Mid-

Mid-Day in fair Weather, and turning and airing the Straw, and changing it often, as recommended by Dr. *Pringle*, will contribute much to preſerve the Health of the Men; and making the Men waſh themſelves daily, and change their Linen often, and keep themſelves otherwiſe clean, ought never to be omitted by the Officers.

All military Authors have recommended to Commanders always to have Straw for their Men when they come to their Ground, if poſſible; and to have the Army well ſupplied with Proviſions; giving proper Encouragement to the Country People, and to Suttlers and Merchants of all Sorts, to bring in every Kind of Proviſions and other Neceſſaries to Camp; and preventing, as much as poſſible, the Soldiers from moroding. And the Commanders of every Corps ought to take Care that their Men form themſelves into Meſſes, and that Stoppages be made for buying them Proviſions.

In *Germany* every Regiment of the *Britiſh* Troops contracted with a Butcher, who was obliged to carry along with them, at all Times, a certain

a certain Number of live Sheep and Oxen to kill when wanted, and to ſell the Meat at a fixed Price. Every Soldier was obliged to take a certain Quantity, which was paid for by Stoppages made in his Pay; and this Meat was boiled in the Camp Kettles, with ſuch Roots and Greens as could be got; by which Means the Men, whenever they could uſe their Kettles, had always a good warm Soop, as well as Meat, to refreſh them after their Fatigues, which, along with their Ammunition Bread, made a good wholeſome Food.

In Countries where Fruit is plentiful, a certain Quantity of what is fully ripe, diſtributed to the Men in warm Weather, and in hot Climates, will contribute to preſerve their Health, though the Abuſe of it will prove prejudicial; but unripe and acrid Fruits are always hurtful (*d*).

Water

(*d*) The *Britiſh* Soldiers in *Germany* uſed ſometimes to hurt their Health by eating great Quantities of raw unripe Apples, Plumbs, and other unripe Fruits; but the foreign Troops had a much better Method of uſing ſuch Fruits: They commonly boiled or ſtewed them, and eat them with Bread, or with their Meat, which in a great Meaſure corrected their bad Qualities.

The

Water is another Article which Commanders endeavour to have their Camp well ſupplied with, and therefore they generally encamp near Rivers or Rivulets. Where the Stream is ſmall, Care ought to be taken that its Courſe be not interrupted, and that no Filth or Naſtineſs, or any Thing that will ſpoil or corrupt the Water, be thrown into it.

When there are no Rivers or Rivulets near a Camp, and the Men are ſupplied from Wells, if the Water is not pure, very often the digging of deep Pits, and covering the Bottom and Sides with large Stones, and over theſe a Lay of Sand, Gravel, or Chalk, will make the Water pure in a few Hours.

In fixed Camps, where the Water is bad, *Portius* (*e*) propoſes ſtraining it thro' Sand, and has given Figures of Machines to be uſed for that Purpoſe; but the Method propoſed by Dr. *Lind* is ſtill more ſimple, which is, to get

The Orders in the *French* Camp, prohibiting the Men from eating unripe Fruit, were ſtrictly complied with every-where in *Germany* during the late War.

(*e*) See the Treatiſe publiſhed by Dr. *Luc. Anton. Portius* in 1686, *de Militis in caſtris ſanitate tuenda*, *part.* ii. *cap.* vi. In this Book we have many uſeful Things mentioned relative to the Health of Soldiers.

a broad

a broad Caſk with one End ſtruck out; then put a longer Caſk, with both Ends ſtruck out, in the Middle of it; fill the ſhort Caſk one-third with Sand, and the inner longer Caſk above one-half; fill the Reſt of the inner Caſk with the Water, which will filter through the Sand, and riſe above the Sand in the outer Caſk, where it may be allowed to run off into Veſſels placed to receive it, by Means of a Cock, put into the Side of the outer Caſk, fifteen or twenty Inches above the Level of the Sand.

Where there are no ſuch Conveniences for purifying the Water, what is uſed for Drink ought to be mixed with a ſmall Proportion of Spirits, or Wine, or with Vinegar, or Cream of Tartar, when neither of the other two can be got; and if the Water be previouſly boiled, it will be ſo much the better.

In Expeditions into warm Countries, where freſh Water is difficult to be had, a few Stills, with a proper Apparatus, ought to be carried out; and after a Landing is made, the Stills ought to be ſet to work for diſtilling freſh Water from Sea Water in the Manner mentioned

tioned by Dr. *Lind* (*e*); and although a ſufficient Quantity cannot be diſtilled for ſerving the whole Army, yet enough may be got in this Way for the Uſe of the Sick.

When Men are very warm, after long Marches, and other hard Duties, in Summer; Officers ſhould endeavour to prevent their ſwallowing immediately great Quantities of cold Water, and perſuade them to wait a little till they cool; and at ſuch Times, if Spirits can be got eaſily, to order a ſmall Quantity to be mixed with the Water in each Man's Canteen.

Though the Abuſe of vinous and ſpirituous Liquors is very deſtructive to the Conſtitution, yet theſe ſame Liquors, given in Moderation to Soldiers on Service, during the Times of great Fatigues, are ſome of the beſt Preſervatives of

(*e*) Dr. *Lind* relates a Number of Experiments of his having diſtilled Sea Water in different Manners, as recommended by others; and concludes, that the beſt Way of getting freſh Water from Salt, is to diſtil the Sea Water by itſelf, without any Mixture; and he propoſes having a Still Head to the Coppers or Iron Pots in which the Meat is dreſſed aboard a Ship. *Ibid. note to p.* 84, &c.

Health. Spirits, for common Uſe, ought to be mixed with Water; and in the hot Climates made into Punch; though in very cold and wet Weather, and in damp Nights, a Glaſs of pure Spirits, given to the Men going on Duty, is of great Service; for it is always obſerved, that Men are much leſs apt to catch Diſeaſes from being wet when they are upon a March, or at hard Work, than when they ſtand Centinels, or are upon Out-Poſts where they move but little, or when they lie down in their wet Cloaths; and that they are leſs liable to be affected by the Weather after a hearty Meal, or drinking a Glaſs of Spirits, or ſome generous Liquor, than when their Stomachs are empty.

An Infuſion of Bark or other Bitters, and of Garlick, in Spirits, has been found to encreaſe their Efficacy as Preſervatives both againſt the Effects of Cold and malignant Diſtempers. Dr. *Lind* has recommended an Infuſion of Garlick in Spirits as one of the beſt Stomachics and Diaphoretics he knows in cold wet Weather. And many have recommended a Tincture of the

Bark

Bark (*f*): Towards the End of the Year 1743, Mr. *Tough*, one of the Apothecaries to the *Britiſh* military Hoſpital in the late War, then a Mate to a marching Regiment, was ordered to go down the *Rhine* with a Party of Sick, who had the Seeds of the Hoſpital Fever among them, in Bilanders, from *Germany* to *Flanders*. Having had a Caſk or two of Brandy put aboard as Part of the Stores for the Sick, he was afraid leſt the Men ſhould make too free with the Spirits; to prevent which he threw in a Quantity of Bark into each Caſk, and gave the Men regularly, Morning and Evening, a Glaſs of this bitter Tincture. At the ſame Time, the Men were kept extremely clean. By theſe Means moſt

(*f*) During the Campaign in *Hungary*, in the Year 1717, Count *Boneval* preſerved both himſelf and Family from Diſorders, by taking himſelf, and making all his Domeſticks take, two or three Times a Day, a ſmall Quantity of Brandy, in which Bark had been infuſed, at a Time when all the Reſt of the Army were infected with malignant Diſorders. A Regiment in *Italy* continued healthy by the Uſe of the Bark, when the Reſt of the *Auſtrian* Army, who did not purſue the ſame Method, were greatly annoyed with Sickneſs. See *Kramer*. quoted by Dr. *Lind*.

of

of the Sick mended upon the Paſſage, without the leaſt Appearance of the Malignant Fever again amongſt them; whereas, Dr. *Pringle*, who takes Notice of the other Parties who came from the ſame Hoſpitals in *Germany*, tells us, that the Malignant Fever broke out in a violent Degree, and Half the Number died by the Way, and ſeveral others ſoon after their Arrival (*g*).

Commanding Officers ought always to endeavour to proportion the Time the Men are to be upon Duty to the Weather and the Nature of the Climate. The Time of ſtanding Centinel in very hard Froſt, and in cold wet Weather, or in the Heat of the Day in Summer, when the Weather is very warm, and in hot Climates, ought to be ſhorter than when the Weather is dry and more temperate.

The Marches of Troops ought, if poſſible, during the Time of very hot Weather, to be made either very early in the Morning, in the Evening, or at Night; and Officers, during the

(*g*) *Obſervat.* part. i. chap. iii.

Courſe of an active Campaign, ought to ſpare their Men as much as poſſible.

And when they are in Quarters, and have nothing to do, they ſhould narrowly inſpect into their Manner of living; and have them out daily, when the Weather will permit, and exerciſe them, or march them two or three *Engliſh* Miles a-Day, in order to prevent their falling ſick for want of Exerciſe; for Soldiers left to themſelves are very ſubject to Diſeaſes when they come into Quarters after an active Campaign, by leading too indolent a Life, if Officers do not take Care to prevent it. However, at ſuch Times, the Exerciſe ought to be moderate, and the Men ſhould not be brought out in wet Weather.

OF MILITARY HOSPITALS.

WHENEVER Men are ſeized with Diſtempers, they ought immmediately to be ſeparated from thoſe in Health, and either ſent to the Regimental (*a*) or General Hoſpital.

There is no Part of the Service that requires more to be regarded than the Choice of proper

(*a*) Some of the regimental Surgeons in *Germany*, when they took the Field, had always ſome ſpare Tents carried along with their Medicine Cheſts; and when any of their Men fell ſick in Camp, and they could get no Houſe for a regimental Hoſpital in Villages, they ordered theſe Tents to be pitched, and had the Ground within well covered with Straw and Blankets, and then put the Sick into them, and there took Care of them till they found an Opportunity of ſending them to the Flying Hoſpital.

Places for Hoſpitals, and the right Management of them, on which the Health and Strength of an Army often depends; for in wet unwholeſome Seaſons, if infectious Diſorders get into the Hoſpitals, which poſſibly might have been prevented by proper Care, they often weaken an Army in a very ſhort Time far more than the Sword of the Enemy.

We have no Account of the particular Manner in which the Antients took Care of their Sick and Wounded in Times of War; for although we read in *Homer* (*b*) of Surgeons or Phyſicians attending the *Grecian* Camp, and in *Xenophon* (*c*) of *Cyrus*'s having appointed Phyſicians to his Army; and we learn from *Tacitus* (*d*) and

(*b*) *Homer* mentions *Podalirius* and *Machaon*, ſons of *Æſculapius*, as two excellent Phyſicians or Surgeons in the *Grecian* Army. Vid. *Iliad*, lib. ii. Phyſic and Surgery were antiently exerciſed by the ſame Perſons.

(*c*) Vid. *Xenophon. de Inſtitut. Cyri.* lib. i. et viii.

(*d*) *Tacitus*, after giving an Account of 50,000 People being killed by the Fall of an Amphitheatre at *Fidena*, during the Time of a Shew of Gladiators, has theſe Words: "Ceterum "poſt recentem cladem, patuere procerum domus, fomenta & "medici paſſim præbiti; fuit urbs per illos dies, quanquam "mœſta facie veterum inſtitutis ſimilis, qui magna poſt prælia "ſaucios

and *Livy* (*e*), that the wounded *Romans* were received into the Houſes of the Nobility, and had Phyſicians to attend them, and were furniſhed with Fomentations and other proper Remedies; and from *Juſtin* (*f*), that the *Lacedemonians* followed the ſame Method: yet theſe Authors make no Mention of the particular Oeconomy or Manner in which theſe Hoſpitals were conducted.

The Hoſpitals commonly wanted for an Army acting on the Continent, are,

1. One in the Rear, to follow their Motions, ſo as to be always ready to receive the Sick from Camp, which is called the Moveable or Flying Hoſpital. 2. One or more, at ſome

"ſaucios largitione & cura ſuſtentabant." *Vid. lib.* iv. *Annal.* § 63.

(*e*) In *Livy* we find the following Paſſage: "Neque immemor ejus quod initio conſulatus imbiberat, conciliandi animos plebis, ſaucios milites curandos dividit patribus. Fabiis plurimi dati, nec alibi majore cura habiti." *Vid. lib.* ii. cap. xlvii.

(*f*) *Juſtin* mentions the ſame Thing of the *Spartans* after their Defeat at *Sellaſia*—"Patentibus omnes domibus ſaucios excipiebant, vulnera curabant, lapſos reficiebant." *Vid. lib.* xxviii. cap. iv.

Diſtance, in Towns, to receive ſuch of the Sick as can be moved from the Flying Hoſpital, when they are obliged to go from one Place to another; or when a greater Number of Sick is ſent to them than they can eaſily take Care of (*g*).

Each of the Hoſpitals ought to be provided with Phyſicians, Surgeons Mates, Purveyors, or Commiſſaries, and others, to attend and take Care of the Sick.

Beſides the phyſical People who attend the Hoſpital, one or two Phyſicians ought to go along with the Army to attend the Commander in Chief, and the General and Staff Officers, in Caſe of Sickneſs; and an Apothecary, provided with a ſmall Cheſt of Medicines, ought to attend at Head Quarters to make up the Preſcriptions of the Phyſicians.

(*g*) When Parties of Sick or Wounded are to be ſent from Camp, or from one Hoſpital to another, Care ought to be taken that they are placed properly in the Waggons; that they have proper phyſical People, Nurſes, *&c.* to attend them; as well as Proviſions, and other Neceſſaries, ſo as to be in no Danger of wanting any Thing while they are on their Journey.

A Number of Hoſpital Surgeons alſo, with Mates, ought to attend the Army, to be ready in Caſe of an Action. Theſe ought to be attached to the Suite of the Commanders of the different Corps or Brigades, and to be quartered or encamped with them. And each Surgeon ſhould be provided with a Waggon or ſome Horſes loaded with a proper chirurgical Apparatus, as Inſtruments, Bandages, Lint, and other Things neceſſary for taking Care of the Wounded.

A ſmall Quantity of Medicines, ſome Wine, Rice, portable Soop, *&c.* and Utenſils for a ſmall Hoſpital, and two, three, or four hundred Sets of Bedding, ſhould be carried about with the Army, in Caſe of an Action, for the Uſe of the Wounded, till they have Time to receive Aſſiſtance from the Flying Hoſpital. Some of the Bedding ought to be carried on Horſeback, ſo as to be at Hand when any of the Surgeons are ſent with Detachments that are going upon an Attack.

To prevent crowding the General Hoſpitals in Winter Quarters, every Regiment ought to

take Care of their own Sick, and to have proper Hoſpitals fitted up for them.

Dr. *Pringle* has laid down ſome very good Directions with regard to the Choice of Places fit for Hoſpitals, and the Method of preventing infectious Diſorders in them; and we find many excellent Hints of this Kind in Dr. *Lind* and Monſ. *du Hamel*'s Treatiſes on the Means of Preſerving the Health of Seamen, and ſome likewiſe in Dr. *Brockleſby*'s late Treatiſe on military Diſorders.

In the Time of Service the Commander in Chief generally orders the Hoſpitals to be eſtabliſhed in Towns or Villages that leaſt interfere with the military Operations, to which the Sick and Wounded can moſt eaſily be conveyed; and which he can beſt protect from the Inſults of the Enemy (*b*).

In

(*b*) The *Roman* Generals ſeem to have ſent their Sick and Wounded into Towns, in the ſame Manner as is done by thoſe of the preſent Time. For we read in *Cæſar's Commentaries* of this Method having been practiſed on more Occaſions than one. In the ſixty-ſecond Chapter of the third Book, *de Bello Civili*, we have the following Paſſage: "Itaque nulla interpoſita

In Towns, the Places fitteſt for Hoſpitals are public Buildings, which have large dry airy Apartments, ſituated on a high Ground, where there is a free Draught of Air, and a Command of Water.

In Winter, thoſe Houſes, which have open Fire Places in the Rooms, are always preferable to ſuch as have cloſe Stoves, or no Fire

" ſita mora, ſauciorum modo & ægrorum habita ratione, im-
" pedimenta omnia ſilentio prima nocte ex caſtris *Apolloniam*
" præmiſit, ac conquieſcere ante iter confectum vetuit. His
" una legio miſſa præſidio eſt."—And immediately after, in chap. lxv. " Itaque præmiſſis nunciis ad Cn. Domitium Cæſar
" ſcripſit, & quid fieri vellet oſtendit: præſidioque *Apolloniæ*
" cohortibus iv. *Liſſi* i. tres *Orici* relictis; quique erant ex
" vulneribus ægri depoſitis; per Epirum atque Arcarniam iter
" facere cæpit.

And in the twentieth chapter, *de Bello Africano*, we read: " *Labienus* ſaucios ſuos, quorum numerus maximus fuit, jubet
" in plauſtris deligatos *Adrumentum* deportari."

It would be a right Meaſure, in the Beginning of every War, to ſettle by a Cartel that military Hoſpitals on both Sides ſhould be conſidered as Sanctuaries for the Sick, and mutually protected; as was agreed upon between the late Earl of *Stairs*, who commanded the *Britiſh* Troops, and the Duke *de Noailles*, who commanded the *French* in the Campaign in *Germany* in the Year 1743. See *Dr. Pringle's Preface.*

Place

Place at all; for an open Fire Place ſerves to keep up a free Circulation of Air in a Room, as well as to keep it warm. And for the ſame Reaſon, where nothing but Stoves can be got to warm the Wards, the Wynd Stoves, which open into the Room or Ward, are vaſtly preferable to the cloſe ones.

Where there are no public Buildings, private Houſes anſwering neareſt to the above Deſcription are moſt proper for Hoſpitals. In general, Houſes with ſmall Rooms make but bad Hoſpitals; and very Damp and cloſe Places ought by all Means to be avoided.

In Summer, when the Moveable or Flying Hoſpital is ordered into Villages, large Barns, and the largeſt airy Houſes, are the beſt.

Churches, ſituated on a dry high Ground, make good Summer Hoſpitals; and in Winter, when Neceſſity obliged us ſometimes to uſe them in *Germany* for this Purpoſe, they were found to anſwer very well, when we had Bedſteads or Cradles for the Men to lie upon, and the Wynd Stoves to keep them of a moderate Heat.

In

In making Choice of Houſes for Hoſpitals, particular Regard ought to be had to the Privies or Neceſſaries; becauſe, where their Smell is offenſive, there is always Danger of infectious Diſorders. If, therefore, there be no proper Conveniencies of this Kind about an Hoſpital, ſuch ought to be contrived ſo as to prevent any Danger from their putrid Effluvia. If there be a River near the Hoſpital, the Neceſſaries may be made above it at a Place where there is a rapid Stream below. In Villages deep Pits may be dug in the Ground behind the Hoſpital, and Seats made over them, as in Camp; and a thick Lay of Earth be thrown above the Fœces every Morning, till the Pits are near full, and then they muſt be filled up, and others dug to ſupply their Place.

When once the Places are fixed upon for Hoſpitals, every Ward ought to be made perfectly ſweet and clean; firſt, by ſcraping and waſhing with Soap and Water, and afterwards with warm Vinegar; and then they ought to be fumigated with the Smoke of wetted Gunpowder and of Aromatics, and afterwards well dried

dried and aired by lighting Fires, and opening the Windows, before any Sick are admitted.

After this the Beds ought to be laid; in doing of which great Care ſhould be taken not to crowd the Wards too much, as nothing corrupts the Air ſo much, or ſo ſoon brings on infectious Diſorders. Dr. *Pringle* ſays, the Beds ought to be laid ſo thin, that a Perſon unacquainted with the Danger of bad Air, might imagine there was Room for double or triple the Number. In high lofty Apartments, and in Churches, and other large Places, the Beds may be laid much cloſer together than in Rooms with low Cielings. In Churches, or ſuch Places, thirty-ſix ſquare Feet, or a Square of ſix Feet by ſix, may be allowed for each Man; but in common Wards we muſt allow from forty-two ſquare Feet, *i. e.* ſix by ſeven Feet, to ſixty-four ſquare Feet, or eight by eight, according to the Height of the Cieling, the Airyneſs of the Place, and the Nature of the Diſeaſes of the Patients.

The Bedding moſt fit for Hoſpitals, is Palliaſſes and Bolſters filled with Straw, Sheets, and

and Blankets, as they can eaſily be waſhed. Feather Beds and Matraſſes are apt to retain Infection, and cannot be eaſily cleanſed. In the fixed Hoſpitals, Bedſteads or Cradles may be ſet up for laying the Bedding on: But in the Moveable or Flying Hoſpital the Bedding muſt be, for the moſt part, laid on the Floor.

When once the Beds are laid, and the Sick arrive, ſome of the Gentlemen belonging to the phyſical Department ought to attend, to diſtribute the Sick properly through the Hoſpitals.

All the Surgery Patients, ſuch as have Wounds, Ulcers, Sores, the Venereal Diſeaſe, *&c.* ſhould be ſeparated from the Reſt, and put either into particular Wards by themſelves, or into an Hoſpital fitted up for that Purpoſe under the Direction of the Surgeons.

Thoſe labouring under infectious Fevers and Fluxes, ſhould each of them be placed in good airy Wards by themſelves, where the Beds are laid much thinner than in the other Wards of the Hoſpital. If the Flux Wards have a Privy near them, where the Men can eaſe themſelves,

ſelves, without being offenſive either to their own Ward, or any other Part of the Hoſpital, they are ſo much the fitter for ſuch Patients. In the Hoſpital I attended at *Bremen*, the Flux Ward had a Neceſſary that opened into the River *Weſer*, and at *Natzungen* a deep Pit was dug in the Field about twenty Yards from the Barn where the Flux Men lay, which kept theſe Wards always ſweet.

Patients that have got the Itch, or any other infectious Diſtemper, ought likewiſe to be put into ſeparate Wards by themſelves; and at all Times a Place ſhould be ſet apart for thoſe who may be taken ill of the Meaſles or Small-Pox. A Houſe ſeparated from the other Hoſpitals, with a diſtinct Set of Nurſes and other Attendants, bids faireſt to prevent the Infection from ſpreading.

When once the Sick are properly ranged, the next Care muſt be to prevent infectious and malignant Diſorders from being generated, and from ſpreading amongſt the Sick; which is principally to be effected by keeping the Sick

and

and the Hoſpital extremely clean and well-aired, and the Wards as ſweet, and free from putrid and offenſive Smells, as poſſible.

Every ſick Man, as ſoon as he arrives at an Hoſpital, ſhould be waſhed with warm Water, or if there is a warm Bath, or bathing Tub, to be put into it; and afterwards be ſupplied with a clean Shirt (*i*) well-aired before he be put to Bed; and his own dirty Linen ſhould be immediately carried to the Waſh-Houſe: And every Morning each Nurſe ought to carry a Bucket full of warm Water, and a Piece of Soap and a Towel, round to each of her Patients, and make them waſh their Hands and Face, and their Feet, when dirty.

Every Morning all the Wards ought to be ſcraped and ſwept, and afterwards ſprinkled with warm Vinegar; and when dirty, they ought to be waſhed after the Fires are lighted.

(*i*) Every military Hoſpital ought to have a Number of Shirts belonging to it, for the Uſe of the Sick who arrive without having clean Linen with them. As ſoon as their own Shirts are waſhed and dried, or that new ones are provided by their Regiments, the Hoſpital Shirts ought to be taken from them.

Every

Every Thing in the Wards, and about the Sick, ſhould be kept as clean as poſſible; the Chamber-Pots and Cloſe-Stools ought to be carried away as ſoon as uſed, and immediately emptied and waſhed before they be brought back.

The Windows of the Wards ought to be kept open to admit freſh Air Morning and Evening, for a longer or ſhorter Time, according as the Weather will permit.

If the Wards are cloſe, and the Cieling too low, Dr. *Pringle* adviſes to remove ſome Part of them, and to open the Garret Story to the Tiles (*k*); and if the Opening of the Windows

(*k*) In Wards which are too cloſe, it has been found that one or two ſquare Holes (of about ſix or eight, or ten Inches diameter), cut in the Cieling, and a Tube made of Wood fitted to it, and carried up into the Chimney of the Ward above, ſo as to enter above the Grate, is one of the beſt Contrivances for procuring a free Circulation of Air; as the foul Air, which is lighteſt, and occupies the higheſt Part of the Ward, finds a free Exit by theſe Tubes: We have ſuch Tubes now fixed in ſeveral of the Wards in *St. George*'s Hoſpital. A Hole cut above the Door of the Ward, or in the upper Part of the Windows, and one of what are called the *Chamber Ventilators* fixed in it, will anſwer, where Holes cannot be conveniently cut in the Cieling.

is

is not ſufficient to air the Wards, Ventilators of different Kinds, ſuch as thoſe mentioned by Dr. *Hales* and Dr. *Pringle*, may be uſed, eſpecially when the Weather is hot.

In Winter, Fires ſhould be lighted in all the Wards where it can be done.

In foreign Countries, when we meet with Hoſpitals where there are no Places for open Fires, but only cloſe Stoves, different Contrivances may be uſed to renew the Air. Ventilators of different Kinds may be uſed, or Openings made in the Doors and Windows. In Winter 1761-62, ſome of the Wards in the Hoſpital at *Bremen* which I attended had ſuch Stoves. In order to keep up a free Circulation of Air in thoſe Wards, I directed large Holes to be cut in the lower Part of the Door in each Ward, and two Grooves to be made on the Outſide of the Door, above and below the Hole, parallel to each other, in which a Board ſlided; by means of which, the Hole could be either quite covered or only in Part, or left entirely open; and I directed a Caſement,

about eight or nine Inches ſquare, to be made in the upper Corner of each Window. After the Fires were lighted, upon removing the Board which covered the Hole in the Door, and opening the little ſquare Windows, a Current of freſh cool Air ruſhed into the Ward by the Door, while the heated foul Air found an Exit by the Windows. In very cold Weather, the Opening of the ſmall Windows was ſufficient; but in mild Weather, and in Summer, it was neceſſary to keep both open.

The Wards ſhould be daily fumigated by Means of Aromatics, or wetted Gunpowder thrown on burning Coals, put in an Iron Pot or Chaffern, or with the Steams of warm Vinegar placed in the Middle of the Ward. Dr. *Lind* ſays, that although Cleanlineſs and a pure Air contribute much to prevent infectious Diſorders, or to check them, yet that they of themſelves are not always ſufficient; but that he ſeldom or never knew a proper Application of Fire and Smoke to be unſucceſsful in producing the happy Conſequence of effectually purifying

purifying all tainted Places, Materials, and Subſtances (*k*).

In all Military Hoſpitals, at leaſt in the fixed ones, one Ward ought to be always kept empty; and whenever a malignant Fever, or any other infectious Diſorder, breaks out in any Ward, the Men ought to be removed into this empty one; and the foul Ward purified, by waſhing and cleaning it well with Soap and Water, and then with warm Vinegar; and afterwards purifying it with Smoke, in the ſame Manner as is practiſed in his Majeſty's Ships of War; and Fires ſhould be lighted daily, and the Windows kept open for ſome Time, before any Sick be again admitted into it.

(*k*) Dr. *Lind* tells us, that the Ships of War in his Majeſty's Service are purified by Fire and Smoke, and gives the Proceſs by which it is done; and he ſays, that he never heard of any Ship, which, after being carefully and properly ſmoked, did not immediately become healthy for the Men.—See *Firſt Paper on Fevers and Infection.*—And he obſerves, that theſe Steams and Smoke, which are inoffenſive to the Lungs, beſides correcting the bad Quality of the Air, produce another good Effect; which is, to make both the Patients and Nurſes deſirous of opening the Doors and Windows for the Admiſſion of freſh Air. *Ibid.* p. 51.

As ſoon as any Patient dies, the Body ought to be removed to the Dead Houſe; and the Bedding he lay upon ſhould be carried away immediately, and not uſed again till it has been ſmoked, well-aired, and waſhed.

All the Linen of Patients in Fevers, Fluxes, and other infectious Diſorders, ought to be changed often; and all the foul Linen and foul Bedding of the Hoſpital ſhould be ſmoked with the Fumes of Brimſtone, or of wetted Gunpowder, in a Place ſet apart for that Purpoſe; and Dr. *Lind* adviſes to ſteep them firſt in cold Water, or cold Soap Lees, before putting them in warm Water; as it is dangerous for any Perſon to receive the Steam that may at firſt ariſe, where this Precaution is not uſed.

All the Cloaths, of Soldiers who die in Hoſpitals, ought to be ſent to the Smoke Houſe, and be well fumigated, and afterwards aired, before they are put up in the Store-Houſe.

The next Thing to be conſidered about a Military Hoſpital is the Diet of the Patients, which ſhould conſiſt of good wholeſome Proviſions,

viſions, that can be purchaſed eaſily, and at a cheap Rate (*k*).

Good Bread (*l*) is a ſtanding Article of Proviſions for an Hoſpital in all Countries and in all Climates; and a certain Quantity of it ought to be diſtributed to each Man daily.

The Breakfaſt and Supper in moſt Military Hoſpitals muſt be made of Water Gruel or Rice Gruel; as either Rice or Oatmeal can be got in moſt Places, and are very portable.—Water Gruel is in general preferable to the Rice Gruel, becauſe moſt Patients nauſeate the Rice Gruel, after eating it for ſome Days, but not the Water Gruel, as every Perſon, who has attended the Military Hoſpitals, muſt have ex-

(*k*) The *French*, and many other Nations, give their Patients Meat Soops in acute Diſeaſes, and after capital Operations; and they allow them but little Bread or other Preparations of Vegetable Subſtances: But theſe Meat Soops without Bread do not nouriſh the Patient ſufficiently, and tend too much to the Putreſcent; and this is one Reaſon why more Sick die in the *French* than in the *Britiſh* Hoſpitals.

(*l*) On Expeditions where a Siege is expected, a Quantity of Flour ought to be carried out, and a Number of portable Ovens for baking bread for the Sick, which may be put up after the Troops have made good their Landing.

perienced. Where both Rice and Oatmeal can be had, Rice Gruel may be uſed two or three Times a Week by Way of Variety.

But although Rice Gruel is not ſo proper for conſtant Uſe, yet Rice ſhould always make an Article among the Stores for an Hoſpital, as it is uſeful for making Rice Water for Drink; and it can be boiled or ground, and made into a light Pudding, and in ſhort may be uſed in a Variety of Forms to make a good and wholeſome Food for the Sick.

Oatmeal is cheaper than Rice, and can be procured almoſt every-where in *Europe*, where Armies make Campaigns; as Oats make ſuch a great Article in the Forage for Horſes. And a ſufficient Quantity can at any Time be ground into Meal for the Uſe of the Sick, at the Mills which are employed for making Flour for the Bakery, if there be none nearer the Hoſpital.

In Countries where neither Oatmeal nor Rice can be had, *Indian* or ſome other Corn, which is known to be wholeſome, and which the Country affords, may be employed in their Place.

When

When freſh Meat can be got, the Men who are on full Diet, and the Nurſes and other Servants about the Hoſpital, ſhould have Meat for Dinner; and the Meat that is boiled for them ought to make Broth for the Sick who are kept on a low or middle Diet. Some Barley or Rice ſhould be added to the Broth; and a ſmall Quantity of Carrots, Turnips, or other Vegetables, boiled along with them, will make it more agreeable to the Taſte.

On Expeditions where nothing but ſalted Meat can be had, a Quantity of portable Soop ſhould always be carried out for the Uſe of the Sick; which with Water and ſome Barley, and freſh Vegetables, when they can be got, will make a good Soop or Broth. On ſuch Occaſions, the Dinner ought to conſiſt of Soop and Bread, or of light Puddings made of Flour or of Rice, of boiled Rice or Barley, or of Panado, *&c.*

Nurſes and recovered Men may be allowed ſalted Meat twice or thrice a Week.

The common Drink of Military Hoſpitals ought to be Rice and Barley Water, with a

ſmall Proportion of Spirits and Sugar. Small Beer is a good Drink where it can be eaſily procured; as is Wine and Water, or a very ſmall Negus, or very weak Punch in warm Climates.

Beſides this Diet, extraordinary Indulgences may be occaſionally allowed to particular Patients, as Wine, Brandy, Sugar, Milk. And the Phyſicians and Surgeons ought to have a diſcretionary Power to order a Vegetable or any other proper Diet for Patients in the Scurvy, or any other particular Complaints.

The

The Eſtabliſhed Diet of a Military Hoſpital may be,

	Breakfaſt.	*Dinner.*	*Supper.*
Full Diet,	One Pint of Water or Rice Gruel. Water Gruel made with 3 or 4 Ounces of Oatmeal, a little common Salt, and with or without a little Sweet Oil, and two Spoonfuls of Wine. Rice Gruel made with two Ounces of Rice, one Spoonful of fine Flour, a little common Salt and Sugar.	One Pound of boiled freſh Meat.	As Breakfaſt.
MiddleDiet,	Ditto.	One Pint of Broth, half Pound of boiled Meat.	Ditto.
Low Diet,	Ditto, or according to the Patient's Appetite.	One Pint of Broth, or half a Pint of Panado, with two Spoonfulls of Wine, and a Quarter of an Ounce of Sugar.	Ditto.

The daily Allowance of Bread to be one Pound to each Man.

The

The common Drink for thoſe on full and middle Diet to be Rice or Barley Water, with two Spoonfuls of Brandy to each Pint, and a Quarter of an Ounce of Lump Sugar; ſmall Beer, or very weak Punch; or Wine and Water, two Ounces of Wine to a Pint of Water, and a Quarter of an Ounce of Sugar. The Quantity not to exceed three Pints *per* Day.

Thoſe on low Diet to have Rice or Barley Water as above, with or without Wine or Brandy.

The Diet Boards hung up in the Hoſpitals may be made with the following Columns, nearly as they were with us in *Germany*.

Regiments.	Mens Names.	Diet. F.	M.	L.	Wine. ½ Pints.	Brandy. Ounces.	Milk. ½ Pints.	Sugar. Ounces.

When

When ſuch Diet Boards are kept in an Hoſpital, and the Mens Names and Regiments are once wrote down, the Patients may with very little Trouble be put upon the full, middle, or low Diet, with ſo much of the above-mentioned Extraordinaries as may be judged proper.

If any Thing elſe be wanted for the Sick, the Phyſician ought to give a particular Order in Writing for it, the Columns here marked being only for ſuch Things as are moſt frequently wanted.

It ſhould be a general Rule in all Military Hoſpitals, that, when a Party of Sick arrives, every Man may have immediately a Meſs of Water Gruel given him, and afterwards be put on low Diet till it is ordered otherwiſe by the Phyſician or Surgeon who attends him.

It is not to be ſuppoſed that the Diet here mentioned can be ſtrictly kept to in all Parts of the World; for it muſt often be varied according to the Difference of the Climates, and to the Proviſion of the Countries where the Scene of War may be.

Whenever

Whenever a Moveable or Flying Hoſpital is to attend an Army, a Quantity of Bedding, and of all Utenſils for forming an Hoſpital, ought to be put up in the Waggons, together with Proviſions of different Kinds, ſuch as Oatmeal, Rice, Sago, Brandy, Wine, Sugar, *&c.* A Butcher with a Stock of live Cattle, and a Baker with a proper Quantity of Flour for making Bread ought conſtantly to attend; and a Number of empty Waggons ſhould likewiſe be always in Readineſs, to tranſport the Sick when the Hoſpital moves, or when a Party is to be ſent to the fixed Hoſpitals.

When Troops go upon an Expedition, beſides the common Hoſpital Ships, another Ship ought to be properly fitted up for the Reception of ſick Officers (*m*); and every Hoſpital Ship ought to be ſupplied with all Sorts of

(*m*) If there be no Ship fitted up for the Reception of ſick Officers, thoſe who are taken ill on Expeditions muſt be in a moſt miſerable Situation; as there is no Place to receive them in the common Hoſpital Ships, they muſt remain almoſt without Aſſiſtance in a crowded Cabin amongſt People in Health; as was the Caſe in ſome of our Expeditions during the late War.

Pro-

Proviſions, and other Neceſſaries fit for forming an Hoſpital, before they leave *England*.—And one or more armed Veſſels loaded with Proviſions, Wine, and all Sorts of Neceſſaries for the Sick, ought to attend them; or if the Expedition be intended for the warm Climates, theſe Veſſels ought to go before the Fleet to take up Wine and Fruits, ſuch as Lemons, Oranges, *&c.* Vegetables of different Kinds, and a live Stock for the Uſe of the Sick.

All Hoſpitals attending Expeditions ſhould carry out among their Stores a Number of large Tents for lodging the Sick and Wounded immediately on making good their Landing. Where a Siege is expected which will take up Time, and where no Accommodations for the Sick can be had till the Siege is over, a Ship or two, with Boards, and other Neceſſaries for building large Sheds, or temporary Hutts, for the Sick, as propoſed by Dr. *Brockleſby*, ought to go along with the Fleet, or meet them at the Place of their Deſtination. Such thatched Sheds, or Hutts, are very neceſſary in the warm Climates, as the perpendicular Rays of the Sun, beating

beating upon Canvaſs, make Tents intolerably hot. When any of our own Settlements happen to be near the Place attacked, a fixed Hoſpital may be eſtabliſhed there; either in Houſes, if proper ones can be found; or in temporary Sheds or Hutts erected for that Purpoſe; and ſome Veſſels, properly fitted up, may be kept going with the Sick and Wounded, and bringing back the recovered Men.

At every Military Hoſpital a Serjeant's Guard ought to mount; and Centinels be placed at the Doors of the Hoſpital, 1. To prevent all Viſitors, who have not proper Leave, from coming into the Hoſpitals; as ſuch People oftentimes crowd the Wards, diſturb the Sick, and are apt to catch infectious Diſtempers, and to ſpread them among the Troops. 2. To take Care the Patients do not go out of the Hoſpital without having a Ticket (*n*) of Leave for that Purpoſe, ſigned by the Phyſician, Sur-

(*n*) At every Hoſpital there ought to be a Number of printed Tickets lying ready to be filled up and ſigned by the Phyſicians and Surgeons, and no Man ought to be allowed to go out without a Ticket ſo ſigned.

geon,

geon, or Apothecary, belonging to the Hoſpital. 3. To prevent ſpirituous Liquors, or other Things of that Kind, being clandeſtinely carried into the Hoſpital.

The Serjeant of the Guard, attended by the Ward Maſter, ought, every Morning, to go round the Wards to call a Roll, and ſee that every Man is in his Ward; and to do the ſame at Night before the Hoſpital Doors are ſhut, and at this Time to order every Perſon out of the Hoſpital who does not belong to it. And the Serjeant, every Morning, ought to report to the Phyſician, Surgeon, or Apothecary, every Man's Name who was found to be abſent at Roll-calling; and whether he found every Thing regular and in good Order in going his Rounds.

Every large Military Hoſpital ought to have one Head Nurſe, and a ſufficient Number of other Nurſes, to attend and take Care of the Sick.

Orders to the following Purport, hung up in every Military Hoſpital, would ſerve to ſhew the Nurſes and Patients what their Duty is, and

and to maintain Regularity and good Order through the whole Hoſpital.

Matron, or Head Nurſe.

Every Matron, or Head Nurſe, is to go round all the Wards of the Hoſpital at leaſt twice a Day, Morning and Evening; to ſee that the Nurſes keep their Wards clean; that they behave themſelves ſoberly and regularly, and give due Attendance to their Patients; and to examine the Diet of the Patients, and ſee that it is good and well dreſſed; and if ſhe finds any Thing amiſs, to report the ſame to the Phyſician, Surgeon, or Apothecary, of the Hoſpital.

Common Nurſes.

1. The Nurſes are to give due Attendance to their Patients; and to keep them always as neat and clean, as the Nature of their Diſtempers will admit of; to give them their Diet regularly; to be particularly careful to ſee them take the Medicines ordered by the Phyſicians, according

according to the Directions given; to report to the Phyſician, Surgeon, or Apothecary, any Faults or Irregularities which any of their Patients may have committed; and to acquaint the Ward Maſter and Head Nurſe of the Death of any of their Patients as ſoon as it happens, that proper Care may be taken of their Cloaths and Effects.

2. They are to keep their Wards extremely clean, to ſprinkle them every Morning with Vinegar, and to fumigate them with the Smoke of wetted Gunpowder, or of Frankincenſe, or any other Aromatics that may be thought proper; in fair Weather to keep open the Windows of their Wards, twice or thrice a Day, for a longer or ſhorter Time, as the Weather will permit; to attend at the Steward's Room for the Proviſions of the Patients at the Hours appointed for that Purpoſe; and to pay implicit Obedience to the Matron, or Head Nurſe, in what relates to their Duty; and punctually to obey all Orders they receive from the Phyſician, Surgeon, or Apothecary, of the Hoſpital.

3. They are to keep themſelves clean and decently dreſſed, and to obſerve the ſtricteſt Rules of Sobriety; remembering, that if any one is found intoxicated with Liquor, that ſhe is immediately to be ſent to the Guard, and afterwards diſcharged.

4. They are not to abſent themſelves from their Wards, unleſs when employed in the Diſcharge of their Duty; nor to go out of the Hoſpital to which they belong, without having a Ticket of Leave ſigned by the Phyſician, Surgeon, Apothecary, or Head Nurſe, belonging to the Hoſpital.

5. They are not to throw Naſtineſs of any Kind out at the Windows, but to carry it to the common Neceſſaries, and to empty the Chamber Pots and Cloſe-ſtools as ſoon as uſed, and be careful to waſh them before they bring them back.

6. They are not, upon any Pretence whatever, to alter the Diet ordered by the Phyſicians or Surgeons to the Patients on the Diet Boards; nor to ſuffer their Patients to uſe any other Diet than what is allowed by the Hoſpital;

nor are they to bring, or allow others to bring, Meat, ſpirituous Liquors, or other Things of that Kind, into their Wards, except what is allowed by the Phyſicians or Surgeons. Whenever any Thing of this Kind is found in any of the Wards, it ought immediately to be thrown into the common Neceſſary; and if it be found in the Cuſtody of a Nurſe, ſhe ought to be confined in the Guard, or diſcharged.

7. Nurſes guilty of great Neglect of Duty, or of getting drunk and uſing their Patients ill, or of ſtealing, or concealing or taking away the Effects of Men who die in the Hoſpital, are to be immediately ſent to the Guard, and reported to the Commanding Officer of the Place, that they may be tried by a Court-Martial, and be confined, whipped, or otherwiſe puniſhed, as the military Law directs; all Followers of Armies on foreign Service being equally ſubject to the military Law as the Soldiers themſelves.

Patients.

1. All ſick Soldiers, on their Arrival at a Military Hoſpital, are to be waſhed all over with

warm Water, or to go into a warm Bath; and afterwards to waſh their Face and Hands every Morning, and their Feet occaſionally, with warm Water and Soap, brought round every Morning by the Nurſes for that Purpoſe; and they ought to comb their Head every Day. If they be too weak to waſh and comb themſelves, it is to be done by their Nurſes.

2. Every Patient is to be ſhaved and have clean Linen twice a Week, or oftener if requiſite.

3. They are punctually to obey the Directions given them, and to take the Medicines ordered by the Phyſician; and none to be allowed to go out of the Hoſpital without a Ticket of Leave ſigned by the Phyſician, Surgeon, or Apothecary, of the Hoſpital.

4. They muſt commit no Diſorder or Riot, but in all Reſpects behave themſelves well.

5. If any Man diſobeys the Orders he receives from the Phyſicians or Surgeons, or is irregular in Conduct, gets drunk, and commits Riots in the Hoſpital, or is found guilty

of Theft or other Crimes, the ſame is to be reported to the Commanding Officer of the Place, and he to be tried by a Court-Martial, and puniſhed as ſoon as his Strength will permit.

In conducting the Military Hoſpitals, we found that it was always right to diſcharge the Patients from the ſick Hoſpitals as ſoon as they were recovered, and to ſend them either to Billet, or to a convaleſcent Hoſpital; becauſe recovered Men are always the moſt riotous; beſides they crowded the Hoſpitals, and were in Danger of catching freſh Diſorders from thoſe who were ſick; and therefore the recovering Men in every Hoſpital ought to be reviewed once or twice a Week by the Phyſician or Surgeon, and the Names of ſuch Men as are well enough, to be marked; in order that they may be ſent the next Day to the convaleſcent Hoſpital, or to Billet. A Return of thoſe marked for Billet ought immediately to be ſent to the Officers on convaleſcent Duty.

When a convaleſcent Hoſpital is eſtabliſhed, it ought to be put under proper Regula-

tions; the following are thoſe which I drew up for that eſtabliſhed at *Oſnabruck* in *April* 1761, and which were found to anſwer the Purpoſe intended.

Regulations for a Convaleſcent Hoſpital.

1. That this Hoſpital be entirely occupied by ſuch Men as are recovered from Diſeaſes; that no Men be ſent there but thoſe whoſe Names are returned to the Purveyor's Office by the Phyſician or Surgeon of the Hoſpital.

2. That all the Patients ſhall be upon full Diet, unleſs in particular Caſes it be ordered otherwiſe by the Phyſician or Surgeon.

3. That all the Patients ſhall breakfaſt, dine, and ſup, at regular ſtated Hours, in the Hall appointed for that Purpoſe: Breakfaſt to be ready at nine, Dinner at one, and Supper at ſeven o'Clock in the Evening.

4. That no Patient ſhall carry up any Victuals into the Wards appointed for ſleeping in; and if any Patient does not attend at the regular Hours of Meals, no Allowance of Victuals

ſhall

ſhall be made him in the Place of ſuch Meals, unleſs he has been abſent on Hoſpital Buſineſs, or been confined to Bed by Sickneſs.

5. That as ſoon as the Men are come down Stairs to Breakfaſt, the Wards in which they ſleep ſhall be cleaned out and ſprinkled with Vinegar, and the Windows opened to air them.

6. That the Doors of this Hoſpital ſhall be locked every Night at eight o'Clock, and no Man be allowed to come in or go out after that Time. The Doors to be opened again at ſeven o'Clock in the Morning.

7. That the ſaid Hoſpital is to be viſited two or three Times a Week by the Phyſician, Surgeon, and Apothecary, who are to ſee that the above Orders are complied with; to examine the Diet, and take Care that every Thing is carried on properly; and to preſcribe for any little Diſorders the Men may be affected with.

8. That one of the Hoſpital Mates be appointed to viſit this Hoſpital daily, to adminiſter any Medicines which may have been pre-

ſcribed by the Phyſician; to apply any Dreſſings ordered by the Surgeon; and to acquaint the Phyſician or Surgeon if any of the Men be ſo bad as to require their Attendance, or to be ſent back again to the Sick Hoſpital.

9. That for the better executing theſe Regulations, orderly Serjeants or Corporals be appointed for the Care of the Men; who ſhall mount a Guard of ſix or more of ſuch of the Patients of the ſaid Hoſpital as are fit for this Duty—That the Serjeants are to call a Roll of all the Patients regularly three Times a Day, before Breakfaſt, Dinner, and Supper; to ſee that the Men behave themſelves ſoberly and decently; and that they keep themſelves clean, and commit no Riots; and to confine in the Guard ſuch as commit Riots and other Irregularities, or whom they find drunk, or who ſtay out all Night; and to report the ſame to the Officer on Duty.

10. That an Officer on convaleſcent Duty do viſit the ſaid Hoſpital daily at the Times of Roll-calling, to ſee that every Thing be carried on properly; and to receive the Reports from the

the Serjeants, and give what Orders he may think proper for the better regulating the ſaid Hoſpital.

11. That if at any Time it ſhould happen that there are more Convaleſcents than the Hoſpital can hold conveniently, a Revew be made of all the Patients, and the ſtrongeſt and moſt healthy be ſent to Billet.

12. That a Review be always made, when any Party is going to join the Army, to pick out the Men who are fit to join their Regiments.

The Phyſical Officers employed in the Military Hoſpitals, are Phyſicians, Surgeons, and Apothecaries.

No Perſon ought to be appointed a Phyſician to the Army, or Military Hoſpitals, without previouſly undergoing the ſame Examination at the College of Phyſicians, as thoſe do who enter Fellows and Licentiates of the College, that none but proper Perſons may be employed. On ſuch Examinations the Phyſician General to the Army ought to be allowed to ſit as one of the Cenſors of the College.

The

The Surgeons are all obliged to pafs an Examination at Surgeons Hall before they are appointed, and the Apothecaries ought in like Manner to pafs an Examination at Apothecaries Hall.

The Mates employed in the Service ought, previous to their Appointment, to be examined both in Surgery and Pharmacy, as the Service commonly requires their acting in both Branches.

The Direction of all Military Hofpitals ought always to be committed to the Phyficians, who have the immediate Care of Hofpitals.

When an Army is acting on a Continent, and there is a Number of Hofpitals in different Places, the Phyfician who attends the Commander in Chief ought to be made Phyfician General and Director of the Hofpitals, with proper Appointments; and all Orders from Head Quarters ought to go immediately thro' this Channel.

Every other Phyfician at the different Hofpitals ought to direct every Thing about the Hofpital

Hoſpital which he attends, and his Orders ought to be punctually obeyed; and he ought to keep up a conſtant Correſpondence with the Phyſician General; acquainting him from Time to Time with the State of the Hoſpital, and what is wanted for it; and he ought punctually to obey whatever Orders he receives from the Phyſician General.

If there be ſeparate Hoſpitals for the Surgery Patients, the eldeſt Surgeon ought to direct every Thing in the Hoſpital he attends; and when any Thing is wanted for his Hoſpital, to report the ſame to the Phyſician General.

The directing and purveying Branches ought never to be entruſted to the ſame Perſon, as the Temptation of accumulating Wealth has at all Times, and in all Services, given Riſe to the groſſeſt Abuſes, which have been a great Detriment to the Service, as well as to the poor wounded and ſick Soldiers, and has occaſioned the Loſs of many Lives. And therefore neither the Phyſician General, nor any of the Phyſicians or Surgeons of the Army, or any other Perſon concerned in the Direction of the Mili-

tary

tary Hoſpitals, ought ever to act as Purveyor or Commiſſary; nor ought they ever to have any Thing to do with the Accounts, Contracts, or any other Money Affairs relating to the Hoſpital; and if ever they be found to intermeddle in theſe Affairs, they ought to be immediately diſmiſſed the Service.

The purveying or commiſſariate Branch ought to be entirely diſtinct from the phyſical. The Purveyors or Commiſſaries ought punctually to obey whatever Orders they receive from the Phyſicians or Surgeons; to provide every Thing for the Hoſpital; to keep regular Accounts of all the Men who come into, or go out of the Hoſpitals; and from Time to Time to make Returns to Head Quarters of all the Men in Hoſpitals; and their Accounts ought to be controuled by ſuch Perſons as the Government may think proper.

Every Phyſician and Surgeon of a Military Hoſpital ought to viſit the Sick at regular ſtated Hours, and the Mates to attend and go round with them, and receive and execute their Orders.

Every

Every Mate ought to have a certain Number of Patients allotted him, for whom he is to make up all Medicines, dreſs all Sores, and execute whatever Orders he receives from the Phyſician, Surgeon, or Apothecary. That the Mates may know and execute their Duty, proper Orders in Writing ſhould be hung up in the Apothecaries Shop for that Purpoſe. The following are thoſe which I gave out at all the Hoſpitals I attended in *Germany*.

Orders for the Mates.

1. That all the Gentlemen do attend at the Apothecaries Shop every Morning at eight o'Clock, to aſſiſt in making up the common Medicines of the Day, and afterwards to go round the Hoſpitals with the Phyſicians and Surgeons.

2. That every Mate have a Book for writing the Preſcriptions of the Phyſicians in, which is to be kept in the following Order.—Firſt, to mark the Patient's Name and Regiment; then the Day of his Entry into the Hoſpital

pital and his Diſorder; then the Preſcriptions of the Phyſician; and after all the Day of his Diſcharge, or of his Death. *Ex. gr.*

John Clarke, 20th Regiment. *Jan.* 1. Fever.

Jan. 1. V. S. unc. x.—H. ſalin. cum pulv. contrayerv. 4r. die.—2. Emplaſt. veſicat. dorſo, &c.

Diſcharged or dead *Jan.* 28.

3. That every Mate make up himſelf the Phyſician's Preſcriptions for his own Patients, and afterwards go round and adminiſter them, or give them to his Patients with proper Directions; that he bleed his own Patients, and dreſs any ſlight Sores they may have, which do not require their being ſent to the Surgery Hoſpital.

4. That every Mate go round amongſt his Patients in the Evening, to ſee that every Thing is well conducted, and to report to the Phyſician or Apothecary if any Thing extraordinary happens.

5. That

5. That two of the Mates attend all Day at the Apothecary's Shop to receive any Sick that may arrive, and to place them properly; to make up what Medicines they may immediately want; to order each of them a Meſs of Water Gruel; and if any Thing extraordinary occurs, to ſend an orderly Man to acquaint the Phyſician or Apothecary with the ſame. The orderly Mates to make up likewiſe for Officers, or others, all Preſcriptions ſent to the Apothecary's Shop through the Day.

A Joint of Meat, roaſted or boiled, for Dinner, and a Bottle of Wine, was allowed to the orderly Mates, by Lord *Granby*'s Order, that they might not abſent themſelves from their Duty.—Where there was Conveniency for it, a Mate lodged in the Hoſpital.

The Apothecary ought to take Care of the Medicines; to go round the Hoſpitals in the Morning before the Time of the Phyſician's viſiting; to ſee that the Wards are in proper Order; that the Nurſes and other Servants have done their Duty; to examine into the State of the Sick, and to ſee that the Proviſions

are good; and make a faithful Report of all these Things to the Physician when he arrives. —To take Care that the Mates prepare in the Morning the Medicines that are commonly wanted for the Day; and that they afterwards make up faithfully the Prescriptions of the Physician; to go round the Hospital again in the Evening, to see that the Sick have got their Medicines regularly; and to make the same Enquiries as in the Morning.

The Apothecary should always be lodged near the Hospital, to assist in Case of any Accidents happening, or of Sick arriving at the Hospital.

When there are any strong infectious Disorders in Military Hospitals, the physical Gentlemen may use the following Precautions to guard themselves against Infection.

1. Never to visit the Sick with an empty Stomach; but to eat Breakfast before they go into the Hospital.

2. To have a Suit of Cloaths reserved for visiting the Hospital, and a waxed Linen Coat to wear above them in going round the Wards; and

and as ſoon as they have come out of the Hoſpital, to waſh and change their Linen and Cloaths.

3. Before they go into the Wards, to order that they be well cleaned out, and ſprinkled with Vinegar, and afterwards fumigated, and aired by opening the Windows, or by working the Ventilators.

4. If the Infection be very ſtrong, to take a Glaſs of the ſpirituous Tincture of the Bark juſt before they go into the Hoſpital.

5. To put ſmall Rolls of Lint, dipped in camphorated Spirits, up the Noſtrils, and to direct a Veſſel, with warm camphorated Vinegar, to be carried round, and held near the Patients they are examining.

6. In examining Patients affected with the Petechial Fever, or any other malignant Diſtempers, to ſtand at ſome little Diſtance, and aſk what Queſtions they may think proper; and when they come near, to feel the Pulſe, and examine the Skin, not to inſpire while their Head is near the Patient's Body; but after being fully ſatisfied in theſe Points, to re-

tire a little, and aſk what other Queſtions may be neceſſary.

It would be right to eſtabliſh ſome military Rank for every commiſſioned Officer of the Hoſpital on Service, and to ſettle the ſame Subordination in the phyſical as in the military Department. By theſe Means, the Service would be carried on with greater Order, and more Advantage to the Sick.

And it would be right, in Times of War, to add a Clauſe in the Mutiny Bill to allow any military Officer on convaleſcent Duty to call in the commiſſioned phyſical Officers to aſſiſt in making up a Court-Martial, when there are not a ſufficient Number of military Officers in a Place, to try convaleſcent Soldiers guilty of Crimes. For in Times of Service, very often a ſufficient Number of military Officers cannot be ſpared to be on Duty at the different Military Hoſpitals; and at all ſuch Places the Convaleſcents are generally very diſorderly, when they know that there is not a ſufficient Number of Officers to form a Court-Martial for puniſhing them. Where-

ever

ever there are a ſufficient Number of military Officers, no phyſical Officer ought ever to be called upon as a Member of a Court-Martial.

Men, in Time of Service, are often apt to ſaunter in and about Hoſpitals, and there learn all Manner of Debaucheries, and loſe all Senſe of Diſcipline; and therefore, to keep up Order and Decorum, there ought to be, at every Fixed and every large Military Hoſpital, a military Inſpector or Commander, an Officer of known Activity and Probity; and a Number of Officers on convaleſcent Duty ſufficient to form a Court-Martial whenever required.

The Duty of the Military Inſpector, or Commander, ſhould be, to take Care of all Convaleſcents on Billet; to ſee that the Officers under him do their Duty, and maintain the ſame Regularity and Diſcipline among the Men belonging to their reſpective Corps, as if they were with their Regiments; and that the Men attend the Parade and Roll-calling; and that they always appear neat and clean.

He ought, from Time to Time, to viſit the Hoſpitals; to ſee if they are kept clean; to

enquire if the Men behave well, if the Diet is good, and the Officers, Nurſes, and Servants, do their Duty; and if he finds any Thing amiſs, to report the ſame to the Phyſicians and Surgeons of the Hoſpital, or to the Purveyor or Commiſſary, or others, under whoſe Department it may be, that the ſame may be immediately rectified; and if he finds that the ſuperior Officers of the Hoſpital overlook ſuch Abuſes, notwithſtanding his Repreſentations, to report the ſame immediately to the Head Quarters.

He ought to order one of the Officers on convaleſcent Duty to viſit the Hoſpitals daily, to make the Enquiries above-mentioned, and to give him a Report of the ſame in Writing.

The Purveyor or Commiſſary ought to make a Return to him twice or thrice a Week of every Man admitted into, or diſcharged from, the Hoſpitals, or who dies in them; marking in the Return the Name of every Man, and the Company and Regiment he belongs to; that he may report the ſame to the Officers of the different Brigades or Regiments.

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The Military Inſpector ought to have the Power of providing Billets for all Officers and Soldiers about Hoſpitals; and the Names of all Men to be diſcharged from Hoſpitals ſhould be ſent to him the Day before they are diſcharged, that he may provide Billets for them; and next Day the Men ought to march from the Hoſpitals to the Parade, to receive their Billets, and the Orders of the Military Inſpector, and of the Officers of the Corps they belong to.

The Military Inſpector ought to ſee that the Arms of the ſick Men, and the Arms and Cloaths of thoſe who die and are lodged in the Magazines, be properly taken Care of; and that the Stores of the different Regiments be properly looked after.

As the Service often makes it neceſſary at Military Hoſpitals, where the Number of Sick is great, to employ the convaleſcent Soldiers (*l*)

(*l*) In the *French* Hoſpitals there are always a Number of Men who attend their Sick who belong to the Hoſpital, ſo that they have no Occaſion to employ their Convaleſcents, as we are often obliged to do, where the Sick are attended by Nurſes, who are commonly Soldiers Wives, and not ſo capable of doing ſuch laborious Work as the Men.

as

as orderly Men and Servants about Hoſpitals, all Men thus employed ought to have a ſpecial Leave from the Military Inſpector for ſo doing; and no Man ſhould be employed in any Capacity as a Servant about an Hoſpital, who at that Time is on the Books as a Patient. And all Men employed about the Hoſpital ought to be reviewed once a Week by the Military Inſpector, and likewiſe whenever a Party of Convaleſcents is going to join the Army, or their Regiments; that no Man may be allowed to remain with the Hoſpital, after he is fit to do Duty in his Regiment.

When the Military Inſpector is abſent, the eldeſt Officer on convaleſcent Duty ought to act in his Place.

Every Officer ſent on convaleſcent Duty ought, as ſoon as he arrives at the Place where the Hoſpital is, to wait on the Commandant, or Military Inſpector; to acquaint him of his Arrival, and to receive his Commands. He ought then to go to the Purveyor or Commiſſary's Office, to get a Liſt of all the Soldiers who are in or about the Hoſpital, and belong to the

the Regiment or Brigade he is employed for, wherein thoſe on Billet are diſtinguiſhed from thoſe in Hoſpitals. The next Day he ought to parade all thoſe marked on Billet, to ſee if the Number of Men agrees with the Liſt given him, and to examine in what State each Man is, and how he is employed; and then he ought to go round the Hoſpitals, attended by an orderly Serjeant, to ſee all the Men in the Hoſpitals, and to know if the Liſt given him at the Purveyor's Office was right; and afterwards he ought to ſend every Day a Serjeant or Corporal to ſee the Men in Hoſpitals, and to report to him when any Men are diſcharged or die.—And he ought to procure from the Military Inſpector a Return of all the Men of his Corps, who are either admitted into, or diſcharged from Hoſpitals, on the Days when ſuch Returns are made. He ought to make all his Men on Billet appear regularly on the Parade at Roll-calling, and to oblige them to keep themſelves clean and their Arms in good Order, and to endeavour to preſerve the ſame Regularity and Diſcipline as when they are

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with their Regiments. And whenever a Party is to be ſent to join their Regiments, he ought to have all his Men particularly examined; and thoſe Men who are found to be perfectly recovered, ſhould be ſent to their Regiments.

If every Officer on convaleſcent Duty conform to theſe Directions, no Man can ever be detained without his Knowledge in or about Hoſpitals, as he muſt always know where every Man is, in what State of Health, and how he is employed; and may at any Time be able to make a Return to the Brigade or Regiment for which he is employed, of every Man who is admitted, diſcharged, or dies in the Hoſpital.

F I N I S.